Director's Report

Project Name: Taco Bell (Bogie Lake Road & Highland Road)

Description: Final site plan and PBD approval

Date on Agenda this packet pertains to: June 16th, 2022

☐Public Hearing

☒Initial Submittal

☐Revised Plans

☐Preliminary Approval

☒Final Approval

☐Special Land Use

☐Rezoning

☒Other: PBD

Contact	Consultants & Departments	Approval	Denial	Approved w/Conditions	Other	Comments
Sean O'Neil	Community Development Director	☐	☐	☒	☐	Based on comments from staff and consultants
DLZ	Engineering Consultant	☐	☐	☒	☐	See letter dated 06/2/2022
Justin Quagliata	Staff Planner	☐	☐	☒	☐	See letter dated 06/2/2022
Jason Hanifen	WLT Fire Marshal	☒	☐	☐	☐	See letter dated 06/2/22
Lisa Hamameh	Township Attorney	☐	☐	☐	☒	See letter dated 06/3/2022

DLZ
ARCHITECTURE • ENGINEERING • PLANNING
SURVEYING • CONSTRUCTION SERVICES

INNOVATIVE IDEAS
EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

June 2, 2022

Sean O' Neil, Director
Community Development Department
Charter Township of White Lake
7525 Highland Road
White Lake, Michigan 48383

RE: Taco Bell- Meijer Out Lot – Final Site Plan and Final Engineering Plan – 4th Review and Cross Access Easement – 3rd Review

DLZ # 2145-7233-16

Dear Mr. O' Neil,

Our office has reviewed the above-mentioned revised plans and documents prepared by Kem-Tech with plans dated May 3, 2022. The plans were reviewed for conformance with the Township Engineering Design Standards. We offer the following comments for your consideration:

Preliminary Site Plan review letter dated October 15, 2021 comments:

Note that current responses to the below Preliminary Site Plan comments are in **bold**.

Stormwater Management

1. Please clarify if stormwater treatment will be accomplished within the existing Meijer detention system or if pre-treatment will be required prior to stormwater leaving the site. *Comment remains, applicant provided sheet (03) Stormwater Plan Markup but does not clarify stormwater treatment. The plan provided references sedimentation forebay volumes, however the contours and piping configuration shown do not support the pond having this forebay. If this is the case, some sort of treatment will need to be provided at the subject property in the form of a mechanical separator sized to remove 80% minimum TSS.* **Comment outstanding, per White Lake DPS Director Aaron Potter's 5/17/2022 email; "If pre-treatment was not built into the Meijer system then this will need pre-treatment addressed". The onsite Meijer development has stormwater pre-treatment in the form**

of a sediment forebay on the west side of the Meijer parking lot. The plans for the retention basin east of Bogie Lake Road do not show any form of pretreatment; Township engineering design standards require pretreatment of stormwater prior to release to a detention or retention basin therefore pretreatment will need to be provided at the site prior to release to the existing storm system.

FSP/FEP Comments-

Note that comments from our April 27, 2022 review letter are in *italics*. Responses to those items are in **bold**. New comments are in standard typeface.

General

1. *Provide new parcel number of 12-20-276-036 (per WLT Board of Review) on plan. Comment partially addressed. The new parcel number is now shown on the survey sheet; however, the updated parcel number has not been updated on subsequent plan sheets, including sheets done by architect. Comment partially addressed. All sheets excepting L+A Architects Sheets A0.5 and A0.6 have been updated. Please have architect update these two sheets with the correct parcel ID number.* **Comment addressed. All sheets have been updated.**
2. *Kem-Tec plan does not show outdoor dining/seating area; architectural site plans do.* **Comment addressed. A note regarding the outdoor dining/seating area has been added to Sheet C 3.0.**
3. *Kem-Tec plan and architectural site plans have differing building dimensions.* **Comment addressed. Building dimensions have been removed from KemTec Sheet C 3.0.**
4. *Kem-Tec plan measures dumpster enclosure dimensions to the outside edge of the structure; while architectural site plans label dimensions to outside edge of structure, the dimensions scale to the inside edge of the enclosure.* **Comment addressed. Trash enclosure dimensions have been removed from Sheet C 3.0.**

Grading/Paving

1. *Revise note on Sheet 3.0 (Site Layout and Paving Plan) from "**Pr**. Concrete sidewalk to remain and be repaired in kind" to" **Ex**. Sidewalk…."* **Comment addressed.**
2. *Kem-Tec plan shows parking stall striping per the zoning ordinance; the architectural site plans do not.* **Comment addressed. Architectural sheets have now been updated.**

Watermain

1. *Remove reference to Plymouth Township under 'Utility Notes' Item 10 on Sheet C5.0.* **Comment addressed. Note has been revised.**

Stormwater Management

1. *The applicant will need to provide information detailing whether this site falls under the Meijer Storm Water Management Facilities Easement, Maintenance Agreement and Lien document or if a new agreement will be required for this development. Likely a new agreement will be required and supporting exhibits will need to be provided. Comment outstanding. Per the design engineer's response dated March 1, 2022, the Storm Water Management, Maintenance Agreement, and Lien document was included with the current submittal. This agreement was not received by our office, nor was it listed as a part of the transmittal to the Township by L&A Architects, Inc. Please provide for review and comment.* **An executed Nonexclusive Storm Water Discharge Agreement dated February 17, 2022 between Meijer and Taco Bell has been received. We consider this comment satisfactorily addressed.**
2. *Show easements for proposed storm sewer on Sheet C5.0. Comment outstanding. The design engineer response letter refers this item to the Meijer Storm Water Agreement of which we did not receive. In addition, the easements for the proposed Taco Bell storm sewer shall be shown on the Utility Plan (Sheet C5.0). Comment partially addressed. The easements for the proposed storm sewer will need to be shown on the plan. Although the design engineer has stated in their response letter that Meijer will not require any additional storm maintenance easements within the Taco Bell Development site, storm easements are required for the proposed storm sewer on the Taco Bell site per White Lake Township requirements.* **Comment addressed. 10' wide easements are now shown on utility plan.**
3. *It appears that the existing as builted SW storm invert for Structure 39A (20073) is at 976.30 which is approximately 1' higher than the proposed N. invert of 975.36 meaning the CB must fill up an additional foot before it discharges to the existing storm sewer. Additionally, the Taco Bell plan and profile shows the SW invert proposed at 974.94. please clarify and revise as necessary.* **Comment addressed; design engineer has indicated that the As-Built plans for the Meijer site are incorrect and the actual invert of the existing 12" pipe is 974.94 as shown on the proposed plan and profile views of the plan set.**

Landscape Plan – Sheet L1

1. *Show watermain, sanitary sewer, and storm sewer on landscaping plan. Trees are not permitted over or within 10' of utilities or within drainage swales. Comment partially addressed. Watermain, sanitary sewer and storm sewer are now shown on the landscape plan; however, the Ginkgo trees proposed near the west side of the property are approximately 5' horizontally separated from the storm sewer and 4.5' from the sanitary sewer. To our knowledge, Gingko tree roots can spread at least 5' and the trees can grow to be quite large. A minimum of 10' horizontal separation is required between the trees and the underground utilities. In addition, the proposed Ginkgo tree just to the west of the sidewalk connection from M-59 to the Taco Bell is also too close to the storm sewer and will need to be relocated. Plantings are shown within the existing sanitary sewer lift station easement; does the easement language allow these plantings? If so, OCWRC may need to review the proposed landscape plan to ensure the plans will not interfere with station access, operation, and maintenance. Applicant indicates they cannot move the Maple trees along the drive thru area any further away from the storm sewer as they are tight on the site where to place landscaping. The issue of plantings within the lift station easement has not been addressed. Please submit plans to OCWRC for comment and approval.* **Applicant indicates that landscape plan has been submitted to OCWRC for review and approval. Please refer to email Comments and plan Markups from Kevin Schulz at OCWRC for required revisions (attached).**

PD Agreement

1. *A draft PD Agreement was included as part of this submittal; we have no comments with respect to engineering related items within the agreement.* **A revised PBD Agreement has been provided as part of this submittal. Comments have been provided under separate cover.**

Cross Access Easement 2nd Review

We have completed our review of the following easement documents:

- Exhibit A- Parcel A- ID 12-20-276-036- Access Easement Sketch and Metes and Bounds Legal Description dated May 18, 2022.
- Exhibit B- Parcel B- ID 12-20-276-020- Access Easement Sketch and Metes and Bounds Legal Description dated May 18, 2022.
- Exhibit C- Unit 1 of Alpine Commercial Center Condominium- ID 12-20-276-023- Access Easement Sketch and Metes and Bounds Legal Description dated May 18, 2022.

We offer the following comments:

Note that comments from our April 27, 2022 review (Note that review on December 13, 2021 was only for McDonalds Cross Access Easement) are in *italics.* Responses to those comments are in **bold**. New comments are in standard typeface.

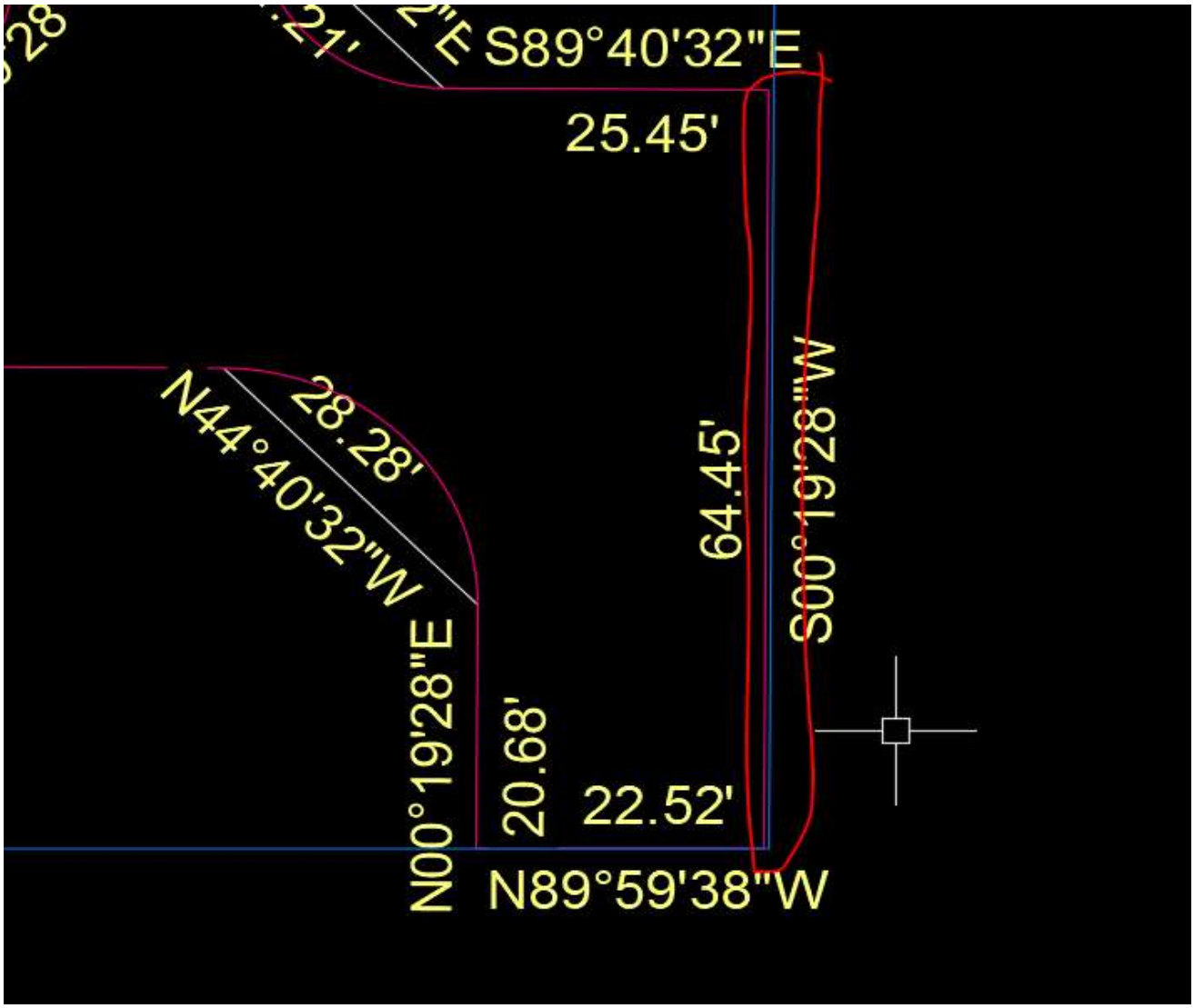
McDonalds Cross Access Easement Comments

1. *Surveyor seal AND signature shall be provided on Sheet 1 of the document. Comment outstanding. All Exhibits shall be sealed and signed by a PS.* **Comment remains outstanding. The first page of each exhibit (A, B, and C) shall be signed and sealed by a PS.**
2. *The Access Easement and Burden Parcel point of commencements are from two different corners. This prevents the Access Easement from being overlaid onto the Burden Parcel without additional information. DLZ recommends writing all descriptions from the same point of commencement. Comment outstanding. This comment now applies to all Exhibits (A-C).* **Comment addressed. All easements (Exhibits A-C) now commence at the same section corner.**
3. *All calls along and to parcel lines should be called out in the descriptions with qualifying language.* **Comment addressed.**
4. *The access easement does not close by 0.1' feet which is minor but should be corrected since the recommendation would be for the Access Easement to be revised and commence at the same point as the Burden Parcel. Comment outstanding. Please reference Comment 2.* **Comment addressed. Per the design engineer, the access easement has been revised so it now closes.**

Comments for All Three (3) Exhibits

5. *Exhibit A, Parcel A- Parcel ID number shall be updated to 12-20-276-**036**.* **Comment addressed.**
6. *Exhibit A, Parcel A- The easement IS aligning with the proposed drive; however, the back of curb does not fall within the easement. See clip below (easement shows as purple).* **Comment addressed.**
7. *In all the access easement descriptions, it shall be specified which section they are commencing at. Currently the descriptions just reference 'commencing at the center of section.'* **Comment addressed.**

8. *Exhibit B, Parcel B- While easement does close, it still starts at a different section corner not shown on the exhibit and therefore cannot be aligned properly to Exhibit A. This was mentioned previously.* **Section corner beginning point satisfied. However, the call that runs along the east line of Parcel B doesn't actually touch the line by 0.4'. See below sketch.**



9. *Exhibit C, Parcel C-Access easement does not align/abut to access easement in Exhibit B by .3741. See blown up sketch below.* **Comment addressed.**

Required Permits and Approvals

The following permits and approvals will be required

1. Permit from the Road Commission for all work within the Bogie Lake Road Right-Of-Way.
2. Permit from MDOT for work within the M-59/Highland Road Right-of-Way.
3. SESC permit from OCWRC.
4. Sanitary Sewer Permit from OCWRC for work on and connection to the existing Sanitary Sewer system.
5. Executed Stormwater Maintenance Agreement, or modification to existing Meijer agreement adding these storm sewer improvements.
6. A cross access agreement will be required among Taco Bell, McDonalds, and Klark Koby (owner of parcel east of McDonalds) for use of the access drive off M-59. In addition, this agreement would need to include language regarding shared maintenance (amongst the three parties for use of the M-59 entrance). **Per the draft PD Agreement and a response letter by the design architect, the developer is working with the two adjacent property owners to obtain a three party cross access easement agreement.**
7. The Nonexclusive Access Easement at the rear of the property will need to be amended to reflect the new location of the proposed access aisle. *The Cross Access Easement descriptions have been received as part of this submittal and are currently under review.* **Comments regarding the exhibits only have been provided as a part of this review letter. The design engineer notes "The nonexclusive access easement was an existing easement as shown on the survey- the proposed new access easement as shown on page 1 and 2 should replace the easement recorded in L. 41482, P.635."**

Recommendation

A few key items remain outstanding regarding stormwater pretreatment, landscaping near the pump station, and easement revisions. DLZ recommends approval subject to the successful resolution of these outstanding items. *Please provide a detailed response letter addressing the above comments.*

Please contact our office should you have any questions.

Sincerely,

DLZ Michigan

Michael Leuffgen, P.E.
Department Manager

Victoria Loemker, P.E.
Senior Engineer

Attachment: OCWRC Landscape Comments and Markup

Cc: Justin Quagliata, Community Development, *via email*
Hannah Micallef, Community Development, *via email*
Aaron Potter, DPS Director, White Lake Township, *via email*
Nick Spencer, Building Official, White Lake Township *via email*
John Holland, Fire Chief, White Lake Township, *via email*
Jason Hanifen, Fire Marshal, White Lake Township, *via email*

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Michael Leuffgen

From: Schulz, Kevin T <schulzk@oakgov.com>
Sent: Tuesday, May 17, 2022 2:31 PM
To: Davis, Mark; Warren, Karen L; Greg Ezzo
Cc: WRC Plan Review; Seymour, Lynne; Sandahl, M. Drew; Nigro, Gary; Aaron Potter; Michael Leuffgen; Paul Modi; glautzenheiser@laarchitectsinc.com
Subject: RE: White Lake Township Taco Bell - Landscape at Sanitary Lift Station
Attachments: scan_schulzk_2022-05-17-13-37-40.pdf

EXTERNAL: Message origin is from an external network. Use proper judgment and caution when opening attachments, clicking links, or responding to this email.

All –
Please see attached scan and comments below regarding proposed landscape:

1. The juniper trees are 6' – 8' spread when mature, center of trees need to be minimum of 10 feet from edge of concrete vault structures.
2. No plants between the wet well and valve vault, these will obstruct maintenance equipment.
3. Gingko trees are NOT desired near the lift station. The fruit drop in the fall presents a cleanup burden. The fruit will also cause odor complaints from people believing the smell is from the lift station.
4. Irrigation system must not wet the control cabinet or concrete vault tops. Wet surfaces are safety hazard for the electrical components and for maintenance personnel working over the wet well & valve vault chambers.

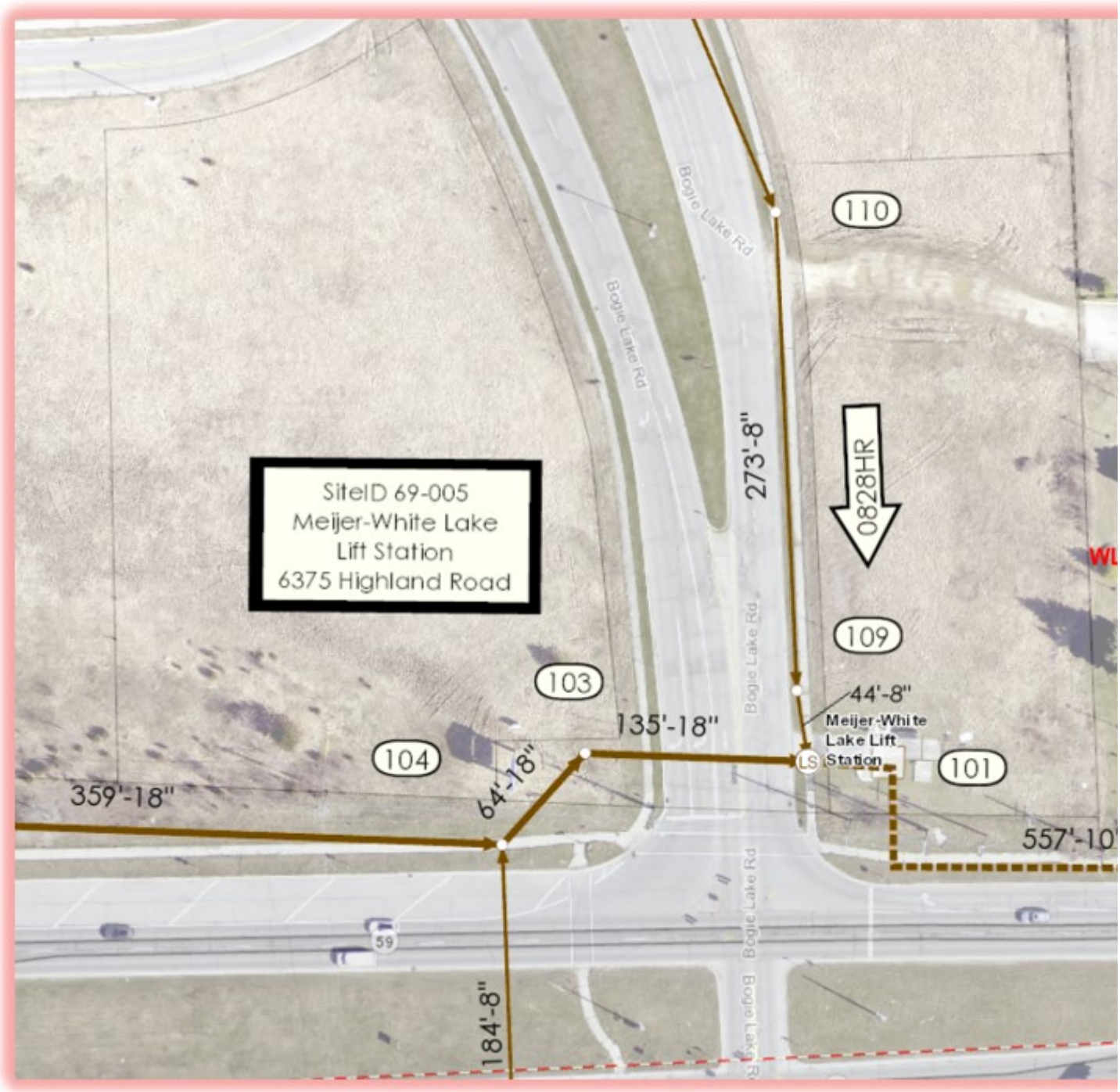
I don't object to plantings between the road and the station for camouflage purposes, but the plantings cannot be a hindrance to maintenance operations.
Regards,

Kevin Schulz
Supervisor II – Pump Maintenance Unit
WRC
4860 Pontiac Lake Road
Waterford MI 48328
schulzk@oakgov.com
O: 248-618-9690

From: Davis, Mark <davisma@oakgov.com>
Sent: 17 May, 2022 12:11
To: Warren, Karen L <warrenk@oakgov.com>; Schulz, Kevin T <schulzk@oakgov.com>; Greg Ezzo <GEzzo@smengineers.us>
Cc: WRC Plan Review <wrcplanreview@oakgov.com>; Seymour, Lynne <seymourl@oakgov.com>; Sandahl, M. Drew <sandahlm@oakgov.com>; Nigro, Gary <nigrog@oakgov.com>; Aaron Potter <apotter@whitelaketwp.com>; Michael Leuffgen <mleuffgen@dlz.com>; Paul Modi <pmodi@smengineers.us>; glautzenheiser@laarchitectsinc.com
Subject: FW: White Lake Township Taco Bell - Landscape at Sanitary Lift Station

Karen/Kevin,
Please see request below to review & approve landscaping at White Lake Meijer PS, for a new Taco Bell site. See attachment.

Greg,
Does the Taco Bell site have sanitary pretreatment device(s) and a 4' diameter Monitoring Manhole proposed on the Service Line?



Thanks

Mark W. Davis

Senior Engineering Systems Coordinator
Oakland County Water Resources Commissioners Office
248-452-2172 (p)
248-858-1066 (f)
248-897-2748 (cell)

From: WRC Plan Review <wrcplanreview@oakgov.com>
Sent: Tuesday, May 17, 2022 10:21 AM
To: Davis, Mark <davisma@oakgov.com>
Subject: FW: White Lake Township Taco Bell - Landscape at Sanitary Lift Station

Hey Mark,

Please see the email below. I would guess this would go to pump maintenance to look at since it's a lift station that they operate and landscaping is being proposed around it? Or, they could just include this sheet in the plan set. They did submit plans under 0147-2022 for the sanitary involvement, but this just appears to be a landscaping plan.

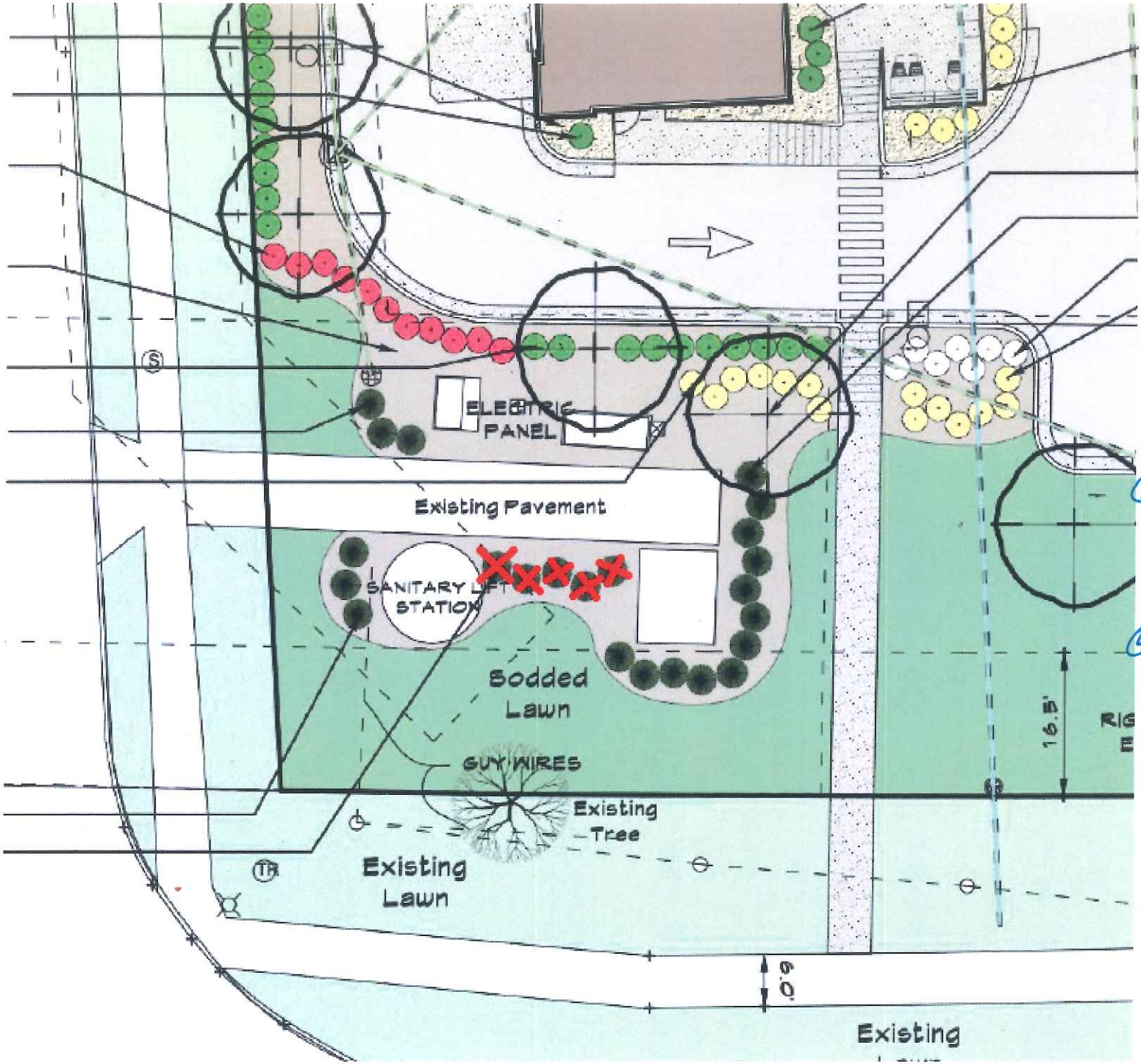
Dan Butkus
Engineering Technician, Plan Review & Permitting Unit
WRC
One Public Works Drive
Waterford MI 48327
butkusdf@oakgov.com
O: 248-858-2089
M: 248-897-2744

From: Greg Ezzo <GEzzo@smengineers.us>
Sent: Tuesday, May 17, 2022 10:14 AM
To: WRC Plan Review <wrcplanreview@oakgov.com>
Cc: Paul Modi <pmodi@smengineers.us>; Greg Lautzenheiser <glautzenheiser@laarchitectsinc.com>
Subject: White Lake Township Taco Bell - Landscape at Sanitary Lift Station

CAUTION: This message is from a sender outside of the Oakland County organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Morning,

We were told by the township to have the landscaping plan reviewed by the county since we are doing some planting near the lift station at the intersection of Bogie Lake Road and Highland Road. Do you know who we should submit this drawing to? We are already submitting for our sanitary and soil erosion, so not sure if it will be addressed in those reviews as well.



① No Planting Between Wet Well & Valve Vault (Red 'X')

② Planting West of Wet Well Minimum of 10 ft from Edge of Concrete Top

③ Planting South & East of Valve Vault Minimum 10 ft From Concrete Top.

④ No Gingko Trees Overhanging Control Panel & Access Drive Gingko Fruit Is A Cleanup Problem In the Fall

DLZ
ARCHITECTURE • ENGINEERING • PLANNING
SURVEYING • CONSTRUCTION SERVICES

INNOVATIVE IDEAS
EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

June 2, 2022

Sean O' Neil
Community Development Department
Charter Township of White Lake
7525 Highland Road
White Lake, Michigan 48383

RE: **Taco Bell- Meijer Outlot** – PBD Review #2

DLZ# 2145-7233-16

Dear Mr. O' Neil,

We have completed our review of the above document for the above-mentioned project and offer the following comments:

Note that comments from our May 12, 2022 review are in *italics.* Responses to those comments are in **bold.** New comments are in standard typeface.

Comments

1. *Article III, Section 3.1 shall include reference to the three required and executed Cross Access Easements.* **Comment outstanding. Design engineer notes that the owner is in discussion with the Township and neighboring properties to resolve the Cross Access Easement Agreement. Language with respect to this item will need to be included in the PDA document section as noted in our original comment above.**
2. *Comments from our Final Site Plan, Final Engineering Plan, and Cross Access Easement review in our letter dated April 27, 2022 shall be addressed. Once approved, the FSP is to be used as Exhibit B to this PBDA document once approved.* **Comment outstanding. Please reference our most recent review letter dated June 2, 2022.**
3. *Exhibit A (PBD Property Description) has not been attached to the PBD document. This exhibit will need to be reviewed by our office.* **Comment addressed.**

Recommendation

We do not recommend approval or acceptance of the document at this time. The above comments will be required to be addressed and the revised document submitted for our review.

Please feel free to contact our office should you have any questions.

Sincerely,

DLZ Michigan

Michael Leuffgen, P.E.
Department Manager

Victoria Loemker, P.E.
Senior Engineer

Cc: Justin Quagliata, Community Development, *via email*
Hannah Micallef, Community Development, *via email*
Aaron Potter, DPS Director, White Lake Township, *via email*

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Rik Kowall, Supervisor
Anthony L. Noble, Clerk
Mike Roman, Treasurer

Trustees
Scott Ruggles
Liz Fessler Smith
Andrea C. Voorheis
Michael Powell

WHITE LAKE TOWNSHIP
7525 Highland Road • White Lake, Michigan 48383-2900 • (248) 698-3300 • www.whitelaketwp.com

June 2, 2022

L&A Architects, Inc.
441 S. Livernois, Suite 265
Rochester Hills, MI 48307

ATTN: Greg Lautzenheiser

RE: Taco Bell
Final Site Plan – Review #4
Planned Business Development Agreement – Review #5

Dear Mr. Lautzenheiser:

Per your request and by request of the Developer, this letter contains a list of final site plan (FSP) comments and planned business development (PBD) agreement comments:

FSP

- Symbol 1 (field brick veneer) and Symbol 5 (accent #2 brick veneer) are identified as the same color within the Exterior Finish Schedule on Sheet A4.0. Revise accordingly.

- Both the field brick veneer and accent #2 brick veneer are colors not supported by staff. The Planning Commission previously informed the Applicant the building materials and color scheme should, generally, be similar to the Taco Bell at 8100 Cooley Lake Road. At said location, the two brick veneer colors are "Almond" and "Pewter." Aesthetically, both of the proposed golden brick veneer colors are not compatible with or complimentary to the architectural character of surrounding buildings in the area. Staff recommends rejection of both of the proposed golden brick veneer colors.

- In the Applicant's response to the last FSP review, it was stated window coverage (percentage) is indicated as "storefront area" on Sheets A4.0 and A4.1. The words "storefront area" shall be replaced with the words "window coverage" on the aforementioned exterior elevations.

- The Westgate floodlights (Fixture H1) shall not be installed and shall be removed from the photometric plan (Sheet A0.7).

- For the LSI Industries, Inc. luminaries, the lumens listed in the Fixture Schedule on the photometric plan (Sheet A0.7) do not match the lumens from the lighting fixture specification sheets. Revise the Fixture Schedule to be consistent with the catalog details.

- For the LSI Industries, Inc. luminaries, the submitted catalog details indicate the fixture finish is to be selected by the architect. Light fixture selections and colors are subject to review and approval by the Township. The fixture finish shall be Bronze. Revise accordingly.

- For the Lithonia Lighting Fixture E2, the submitted catalog details indicate the fixture finish is to be selected by the architect. Light fixture selections and colors are subject to review and approval by the Township. The fixture finish shall be Dark Bronze or Black. Revise accordingly.

- Separate catalog details shall be provided for the Lithonia Lighting Fixture E2E.

- The light pole detail on Sheet A0.7 shall be revised. As stated in previous correspondence, the light pole detail shall indicate the total height including the base, pole, and light fixture (measured to the top of the fixture or pole, whichever is greater). In the Applicant's response to the last FSP review, it was stated the pole height was indicated on the detail. Contrary to said statement, the pole height was not indicated on the detail. Furthermore, the total height indicated (16 feet) is incorrect. The Fixture Schedule on the photometric plan and a note added to the aluminum square pole specification sheet by the Applicant indicated the poles would be 13.5 feet in height. On the Pole Selection Chart on the specification sheet, there is not an option for a 13.5-foot-tall pole. Additionally, the fixtures on the pole-mounted luminaires would be 7.6-inches in height from the point where the fixture meets the pole to the sky-side of the fixture.

- The trash enclosure detail (Sheet G2.0) shall be revised to indicate which brick veneer (multiple proposed) would cover the exterior face of the dumpster/trash storage enclosure. Staff recommends utilizing accent #1 brick veneer to cover the exterior face of the dumpster/trash storage enclosure.

- The Applicant shall clarify the purpose of the 200-gallon outdoor grease container within the dumpster/trash storage enclosure. DLZ informed staff such grease containers are typically used for disposal of fryer grease and get emptied by a waste collection company when full. Per the Engineering Design Standards and sanitary sewers ordinance, all leads to commercial or institutional food service operations shall have a 1,000-gallon grease interceptor (proposed – see Sheet C5.0). Two, 96-gallon compost bins are also proposed within the dumpster/trash storage enclosure. Staff is concerned the outdoor grease container and compost bins could become a nuisance if not maintained. Also, a spill could occur during transfer of fats, oils, and grease (FOG) from inside the building to the outdoor storage container. If not necessary for the operation of the restaurant, consideration should be given to eliminating said bins and container; this would allow the dumpster/trash storage enclosure to be reduced in size.
    - The Applicant shall consult the Director of Public Services on all matters related to FOG. Additionally, the Applicant shall be advised the sanitary sewers ordinance states animal or vegetable grease stored by businesses outside of their buildings must be kept in a self-contained, sealed, leak-proof grease container which is approved by the Township. The container and the area in and around the container must be kept clean, and the name and address of the business must be clearly identified on the outside of the container. Any person or business found disposing of FOG in the Township sewer system and/or not properly maintaining their grease container(s) shall be guilty of a misdemeanor and shall be responsible for the costs incurred by the Township in cleaning-up and disposing of the grease.

- Sign permit applications shall be submitted prior to installation of all proposed signs, including the drive-thru menu board. Signs permits are subject to approval by the Community Development Director or his designee.

PBD Agreement

- Item 2.2, Page 3: The word "commit" shall be replaced with the word "contribute" in the last sentence.

- Item 2.2, Page 3: The words "for public benefit on the Property" shall be added following the word "improvement" in the last sentence.

- As stated in previous correspondence, Exhibit B must be the PBD Plan. Currently, Exhibit B is a "Description of Site Plan and Related Plans and Specifications."

- As stated in previous correspondence, Page 7 of the Agreement shall be revised so the document when recorded is "Returned to" the Township.
    - Recording of the original executed Agreement shall be completed by the Township and all recording fees shall be paid by the Developer.

Other Comments

- All comments of the Township Engineering Consultant shall be addressed.

- All comments of the Township Attorney shall be addressed.

- All site plan review submittals, following the initial Preliminary Site Plan review, shall include a response letter detailing the changes made to the plan since the previous submittal.

Based on the items identified in this letter, the FSP and PBD Agreement are eligible for consideration by the Planning Commission. Staff recommends approval of both the FSP and PBD Agreement, subject to all outstanding items being addressed by revising and resubmitting the necessary documents/plans for administrative backcheck/review prior to the scheduling of a pre-construction meeting for the project. If you have any questions regarding this matter, please contact me at (248) 698-3300 ext. 177 or by email at justinq@whitelaketwp.com.

Sincerely,

Justin Quagliata

Justin Quagliata
Staff Planner

cc: Sean O'Neil, *AICP*, Community Development Director
Hannah Micallef, Community Development
Aaron Potter, Director of Public Services
Michael Leuffgen, DLZ
Victoria Loemker, DLZ
Lisa Hamameh, Township Attorney
Louis Dortch, Dortch Enterprises
Bob Grabowski, Dortch Enterprises
George F. Rizik II, Rizik & Rizik

Fire Department
Charter Township
of White Lake

Site / Construction Plan Review

To: Sean O'Neil, Planning Department Director

Date: 06/02/2022

Project: Taco Bell (Meijer Outlet)

File #: Not shown

Date on Plans: 5/03/2022

The Fire Department has the following comments with regards to the 5th review of preliminary site plans for the project known as Taco Bell.

1. This Plans as submitted has satisfied the requirements of the Fire Department.

Jason Hanifen
Fire Marshal
Charter Township of White Lake
(248)698-3993
jhanifen@whitelaketwp.com

Plans are reviewed using the International Fire Code (IFC), 2015 Edition and Referenced NFPA Standards.

LISA J. HAMAMEH
lhamameh@rsjalaw.com

27555 Executive Drive, Suite 250
Farmington Hills, Michigan 48331
P 248.489.4100 | F 248.489.1726
rsjalaw.com

ROSATI | SCHULTZ
JOPPICH | AMTSBUECHLER

June 3, 2022

via email: soneil@whitelaketwp.com
Sean O'Neil
Community Development Director
White Lake Township
7525 Highland Road
White Lake, Michigan 48383

RE: 5th Review of Planned Development Agreement
Taco Bell – Meijer Outlot

Dear Sean:

You asked that we review the proposed Planned Business Development Agreement for Taco Bell – Meijer Outlot ("Agreement") submitted by Great Lakes Taco, LLC ("Developer"), received by transmittal dated May 18, 2022. We defer to the Township Staff Planner and Engineer reviews of the Exhibits. We offer the following general comments regarding the Agreement:

1. As stated in previous correspondence, the Township should confirm that all of the conditions of approval are listed in Agreement, including the requirement of cross access easements, utility easements, stormwater easements, bills of sale, if applicable, and attachment of any review letters of staff and consultants that approval is conditioned on.
2. As stated in previous correspondence, the Township should consider whether painting the lift station should be permitted as provided in Paragraph 2.2. Additionally, while Developer revised the language regarding the $5,000 contribution, it does not clarify the purpose of the contribution (e.g. is the Developer required to install a sidewalk improvement, for which the contribution is intended). The Developer should follow-up with staff regarding the purpose of the contribution and which fund it is intended for (Parks or Pathway).
3. As stated in correspondence by the Staff Planner, the PBD Plan must be attached as Exhibit B, as provided in Paragraph 1.4.
4. In light of the removal of former Paragraph 5.13 captioned "Force Majeure," reference to that section in Paragraph 5.6 should be removed.

Please let us know if you have any questions or would like to discuss this matter further.

Very truly yours,

ROSATI SCHULTZ JOPPICH
& AMTSBUECHLER PC

Lisa J. Hamameh

Lisa J. Hamameh

cc: Mike Leuffgen

Great Lakes Taco, LLC
Construction Plans

6305 Highland Road, White Lake Twp., MI

APPLICANT

DORTCH ENTERPRISES, LLC
8467 RETREAT DR.
GRAND BLANC, MI 48439 PHONE:
(810)-771-4500

ARCHITECT

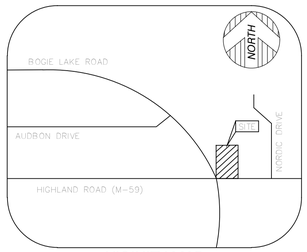
L + A ARCHITECTS INC.
441 S. LIVERNOIS ROAD, SUITE 265
ROCHESTER HILLS, MI 48307
PHONE: (248)-524-4700

CIVIL ENGINEER

KEM-TEC & ASSOCIATES
22556 GRATIOT AVENUE
EASTPOINTE, MI 48021
CONTACT: GREG EZZO
PHONE: (810)-712-8849

LEGEND

- LIGHTPOST/LAMP POST
- SANITARY MANHOLE
- FLAGPOLE
- SET X-CUT
- FOUND MONUMENT (AS NOTED)
- 0.00 GROUND ELEVATION
- ELECTRIC MANHOLE
- ELECTRIC METER
- TRANSFORMER
- UTILITY POLE
- GAS MANHOLE
- GAS METER
- GV GAS VALVE
- LIGHT POLE WITH STREET LAMP
- PUBLIC LIGHTING MANHOLE
- TELEPHONE MANHOLE
- TRAFFIC SIGNAL
- STORM DRAIN MANHOLE
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION
- WV WATER VALVE
- SINGLE POST SIGN
- DECIDUOUS TREE (AS NOTED)
- CONIFEROUS TREE (AS NOTED)
- CLEANOUT
- SQUARE CATCH BASIN
- SANITARY LINE
- STORM LINE
- W WATER LINE
- W GAS LINE
- PROPOSED CATCH BASIN
- PROPOSED MANHOLE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- SAN SAN SAN PROPOSED SANITARY LINE
- PROPOSED STORM WATER LINE
- PROPOSED WATER LINE
- SF SF SF PROPOSED SLIT FENCE



VICINITY MAP
(NOT TO SCALE)

DRAWING INDEX

C1.0	COVER SHEET
1	TOPOGRAPHIC SURVEY
C2.0	DEMOLITION PLAN
C3.0	SITE LAYOUT & PAVING PLAN
C3.1	FIRE TRUCK ACCESS PLAN
C4.0	GRADING PLAN
C5.0	UTILITY PLAN
C6.0	PROFILE PLAN
C7.0	SOIL EROSION & SEDIMENTATION CONTROL PLAN
C8.0	SITE DETAILS

WHITE LAKE TOWNSHIP SANITARY SEWER STANDARD DETAILS
WHITE LAKE TOWNSHIP STORM SEWER STANDARD DETAILS
WHITE LAKE TOWNSHIP WATER MAIN STANDARD DETAILS

OAKLAND COUNTY SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

PARCEL AREA

46,541± SQUARE FEET = 1.068± ACRES

FLOOD NOTE

SUBJECT PARCEL DOES NOT LIE WITHIN A FLOOD PLAIN

SITE BENCHMARKS

BENCHMARK #1
"IRRI" ARROW ON HYDRANT, FIRST HYDRANT ALONG WEST SIDE OF BOGIE LAKE ROAD NORTH OF HIGHLAND ROAD.
ELEVATION = 982.44' (NAVD 88)

BENCHMARK #2
"IRRI" ARROW ON HYDRANT, FIRST HYDRANT ALONG NORTH SIDE OF HIGHLAND ROAD EAST OF BOGIE LAKE ROAD.
ELEVATION = 985.56' (NAVD 88)

PROPERTY DESCRIPTION

LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:
A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH–SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 118.86 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 85 DEGREES 18 MINUTES 14 SECONDS EAST, 118.86 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00 DEGREES 01 MINUTE 09 SECONDS WEST, 236.61 FEET; THENCE 94.59 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 533.50 FEET, CHORD BEARING AND DISTANCE OF NORTH 05 DEGREES 00 MINUTES 27 SECONDS WEST, 94.46 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST, 147.67 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST, 338.00 FEET; THENCE 137.67 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF NORTH 84 DEGREES 36 MINUTES 27 SECONDS WEST, 137.67 FEET TO THE POINT OF BEGINNING.

Know what's below. Call before you dig.

STATE OF MICHIGAN
JOSEPH ROCCO DATTILO
ENGINEER
No. 6201049801
LICENSED PROFESSIONAL ENGINEER

KEM-TEC
PROFESSIONAL ENGINEERING, SURVEYING & ENVIRONMENTAL SERVICES
A GROUP OF COMPANIES
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Detroit (313) 733.0577
Ann Arbor (734) 994.0888
Grand Blanc (888) 894.0001
www.kemtecsgroupofcompanies.com

COVER SHEET

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGIE LAKE ROAD, WHITE LAKE TWP, MI, 48383

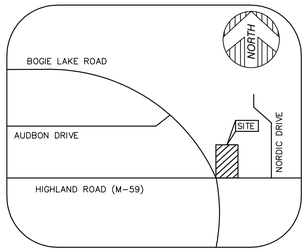
REVISION	DATE	BY
6	05.03.2022	GAE
5	02.28.2022	GAE
4	02.01.2022	GAE
3	11.01.2021	GAE
2	08.02.2021	GAE
1	05.29.2020	GAE

ENGINEERING REVIEW
ENGINEERING REVIEW
SITE PLAN APPROVAL
SPA RESUBMISSION
ENGINEERING SUBMISSION
SPA SUBMISSION
DESCRIPTION

drawn by: GAE 05/03/2022
design by:
date: MAY 03, 2022
project no. 18-00000
scale:

C1.0

C1.0 Cover Sheet.dwg
5/3/2022
dwg 2220



VICINITY MAP
(NOT TO SCALE)

LEGEND

- FOUND SECTION CORNER (AS NOTED)
- FOUND MONUMENT (AS NOTED)
- (R&M) RECORD AND MEASURED DIMENSION
- (R) RECORD DIMENSION
- (M) MEASURED DIMENSION
- 0.00 GROUND ELEVATION
- ELECTRIC METER
- UTILITY POLE
- GAS VALVE
- TRAFFIC SIGNAL
- TRAFFIC SIGNAL MANHOLE
- SANITARY MANHOLE
- ROUND CATCH BASIN
- SQUARE CATCH BASIN
- FIRE HYDRANT
- WATER GATE MANHOLE
- GENERATOR
- WATER VALVE
- WELL
- LIGHTPOST/LAMP POST
- SINGLE POST SIGN
- PARCEL BOUNDARY LINE
- PLATTED LOT LINE
- ADJOINER PARCEL LINE
- CONCRETE CURB
- EDGE OF CONCRETE (CONC.)
- EDGE OF ASPHALT (ASPH.)
- EDGE OF GRAVEL
- OVERHEAD UTILITY LINE
- G GAS LINE
- S SANITARY LINE
- D STORM LINE
- W WATER LINE
- E ELECTRIC LINE
- MINOR CONTOUR LINE
- MAJOR CONTOUR LINE
- BUILDING AREA
- ASPHALT
- CONCRETE

PARKING
NO MARKED PARKING ON SITE

PROPOSED PARCEL AREA
46,541± SQUARE FEET = 1.068± ACRES

BENCHMARKS
BENCHMARK #1
TURN ARROW ON HYDRANT, FIRST HYDRANT ALONG WEST SIDE OF BOGIE LAKE ROAD NORTH OF HIGHLAND ROAD.
ELEVATION = 982.44' (NAVD 88)

BENCHMARK #2
TURN ARROW ON HYDRANT, FIRST HYDRANT ALONG NORTH SIDE OF HIGHLAND ROAD EAST OF BOGIE LAKE ROAD.
ELEVATION = 985.56' (NAVD 88)

SURVEYOR'S NOTES
1. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES OTHER THAN THE STRUCTURE INVENTORY SHOWN HEREON.

2. ALL PROPERTY SPLITS REQUIRE PRIOR CITY, TOWNSHIP, COUNTY, AND/OR STATE APPROVAL.

PROPERTY DESCRIPTION
LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH-SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 118.86 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 85 DEGREES 18 MINUTES 14 SECONDS EAST, 118.86 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00 DEGREES 01 MINUTE 09 SECONDS WEST, 236.61 FEET; THENCE 94.59 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 533.50 FEET, CHORD BEARING AND DISTANCE OF NORTH 05 DEGREES 00 MINUTES 27 SECONDS WEST, 94.46 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST, 147.67 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST, 338.00 FEET; THENCE 137.67 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF NORTH 86 DEGREES 36 MINUTES 27 SECONDS WEST, 137.67 FEET TO THE POINT OF BEGINNING.

TITLE REPORT NOTE
ONLY THOSE EXCEPTIONS CONTAINED WITHIN THE FIDELITY NATIONAL TITLE INSURANCE COMPANY COMMITMENT No. GLT2100144, DATED FEBRUARY 8, 2021, AND RELISTED BELOW WERE CONSIDERED FOR THIS SURVEY. NO OTHER RECORDS RESEARCH WAS PERFORMED BY THE CERTIFYING SURVEYOR.

10. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT: GRANTED TO: GENERAL TELEPHONE COMPANY OF MICHIGAN, A MICHIGAN CORPORATION RECORDING NO: LIBER 6239, PAGE 266. (DOES NOT CROSS SUBJECT PROPERTY)

11. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT: GRANTED TO: GENERAL TELEPHONE COMPANY OF MICHIGAN, A MICHIGAN CORPORATION RECORDING NO: LIBER 6239, PAGE 267. (DOCUMENT NOT LEGIBLE, EASEMENT SHOWN PER PREVIOUS SURVEY)

12. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT: GRANTED TO: GENERAL TELEPHONE COMPANY OF MICHIGAN, A MICHIGAN CORPORATION RECORDING NO: LIBER 6239, PAGE 279. (DOCUMENT NOT LEGIBLE, EASEMENT SHOWN PER PREVIOUS SURVEY)

13. TERMS, COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS WHICH ARE RECITED IN NON-EXCLUSIVE STORM SEWER EASEMENT RECORDED IN LIBER 20698, PAGE 749. (DOES NOT CROSS SUBJECT PROPERTY)

14. TERMS, COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS WHICH ARE RECITED IN ROAD AND GRADING EASEMENT RECORDED IN LIBER 27727, PAGE 92. (DOES NOT CROSS SUBJECT PROPERTY)

15. TERMS, COVENANTS AND CONDITIONS WHICH ARE RECITED IN MEMORANDUM OF DEVELOPMENT AGREEMENT RECORDED IN LIBER 30116, PAGE 166. MEMORANDUM OF AMENDED DEVELOPMENT AGREEMENT RECORDED IN LIBER 48677, PAGE 714. (SEE DOCUMENT FOR TERMS AND CONDITIONS)

16. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT: GRANTED TO: BOARD OF COUNTY ROAD COMMISSIONERS OF THE COUNTY OF OAKLAND, A PUBLIC BODY CORPORATE RECORDING NO: LIBER 35774, PAGE 385. (AS SHOWN)

17. TERMS, COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS WHICH ARE RECITED IN NON-EXCLUSIVE WATER MAIN EASEMENT RECORDED IN LIBER 40404, PAGE 496. (AS SHOWN)

18. TERMS, COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS WHICH ARE RECITED IN NON-EXCLUSIVE SANITARY SEWER EASEMENT RECORDED IN LIBER 40542, PAGE 639. (AS SHOWN)

19. TERMS, COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS WHICH ARE RECITED IN NON-EXCLUSIVE ACCESS EASEMENT RECORDED IN LIBER 41482, PAGE 635. (AS SHOWN)

MANHOLE SCHEDULE

NUM	TYPE	RIM (FT)	SIZE (IN)	DIR	INV ELEV (FT)
20071	STORM CB	979.06	12	NE	973.64
		979.06	12	W	973.64
20072	STORM CB	979.21	12	E	974.01
		979.21	36	W	974.01
20073	STORM CB	979.94	12	SW	974.94
20074	SANITARY MH	980.25	8	N	970.75
		980.25	8	SE	970.51
20075	SANITARY MH	986.31	8	N	973.36
		986.31	8	S	972.91
		986.31	8	N	977.11
20076	STORM CB	985.11	36	W	975.51

SURVEYOR'S CERTIFICATION
TO GREAT LAKES TACO, LLC; MEIJER, INC.; AND FIDELITY NATIONAL TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDED ITEMS 1, 2, 4, 5, 7A, 8, 9, AND 11 OF TABLE A, THEREOF. THE FIELD WORK WAS COMPLETED ON 01/05/2021.

DATE OF PLAT OR MAP: 01/21/2021

ANTHONY T. SYCKO, JR., P.S.
PROFESSIONAL SURVEYOR
MICHIGAN LICENSE NO. 47976
22556 GRATIOT AVE., EASTPOINTE, MI 48021
TSycko@kemtec-survey.com

STATE OF MICHIGAN ANTHONY T. SYCKO, JR PROFESSIONAL SURVEYOR No. 47976 LICENSED PROFESSIONAL SURVEYOR

KEM-TEC
PROFESSIONAL ENGINEERING, SURVEYING & ENVIRONMENTAL SERVICES
A GROUP OF COMPANIES
Ann Arbor (734) 994-0888
Grand Blanc (888) 694-0001
Eastpointe (800) 295-7222
Detroit (313) 758-0877
www.kemteagroupofcompanies.com

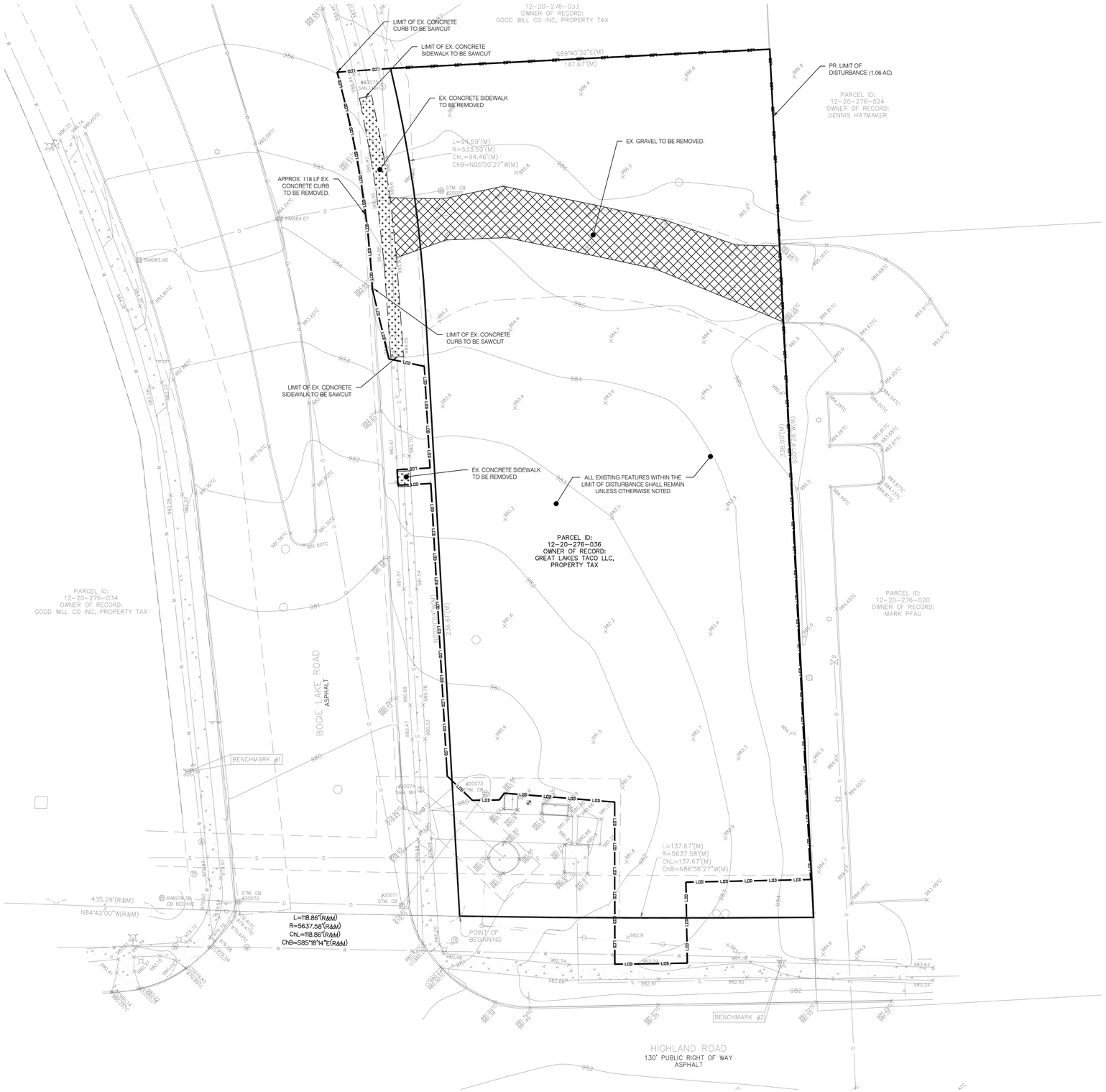
ALTA / NSPS LAND TITLE SURVEY
PREPARED FOR: DORTCH ENTERPRISES
6305 HIGHLAND, WHITE LAKE, MICHIGAN,
PART OF SECTION 20,
TOWN 3 NORTH, RANGE 8 EAST

REVISION	DATE	DESCRIPTION	BY
5	03-01-22	REVISED PARCEL ID OF SUBJECT PROPERTY	JDM
4	11-01-21	PER REVIEW COMMENTS	MRJ
3	10-18-21	ADD SIDEWALK WIDTHS	ATS
2	09-22-21	REVISED PER REVIEW COMMENTS	MRJ
1	03-12-21	ADD TITLE WORK	CMC

DRAWN BY: CMC 01/21/2021
CHECKED BY: ATS 01/21/2021
DATE: JANUARY 21, 2021
SCALE: 1" = 20'
PROJECT NO. 20-03619

1

1 OF 1 SHEETS



GENERAL DEMOLITION NOTES

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT:

1. ALL MATERIAL TO BE REMOVED, WHETHER SPECIFICALLY NOTED IN THE PLANS OR NOT, SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF OFF-SITE IN A LEGAL MANNER. NO ON-SITE BURY OR BURN PITS SHALL BE ALLOWED.
2. ALL DEMOLITION WORK SHALL CONFORM TO ALL LOCAL CODES AND ORDINANCES.
3. STAGING/PHASING OF DEMOLITION AND CONSTRUCTION IS TO BE COORDINATED WITH THE OWNER AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
4. SPECIFIC DEMOLITION ITEMS HAVE BEEN INDICATED ON THE PLANS AS A GUIDE TO THE GENERAL SCOPE OF THE WORK. IT IS THE INTENT THAT THESE ITEMS SHALL BE COMPLETELY REMOVED BY THE CONTRACTOR ABOVE AND BELOW GROUND, UNLESS SPECIFICALLY NOTED OTHERWISE, AND THAT DEMOLITION WILL INCLUDE BUT WILL NOT NECESSARILY BE LIMITED TO THESE ITEMS. CONTRACTOR SHALL VISIT SITE TO VERIFY EXISTING CONDITIONS AND EXTENTS OF THE DEMOLITION THAT WILL BE REQUIRED PRIOR TO SUBMITTING A BID.
5. REMOVE ALL STRUCTURES DESIGNATED FOR REMOVAL ACCORDING TO THE DEMOLITION PLAN. THIS INCLUDES CONCRETE SIDEWALKS, BRICK AND CURBED AREAS, ASPHALT, TRESS, ETC.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN UP, NOISE, DUST CONTROL, STREET SWEEPING AND HOURS OF OPERATION IN ACCORDANCE WITH THE LOCAL CODES.
7. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADES, SIGNAGE, MARKINGS, LIGHTS AND OTHER TRAFFIC CONTROL DEVICES TO PROTECT THE WORK ZONE AND SAFELY MAINTAIN TRAFFIC PER AGENCY REQUIREMENTS AND IN ACCORDANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) LATEST EDITION.
8. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES TO CONFIRM THAT UTILITY LEADS HAVE BEEN TAKEN OUT OF SERVICE PRIOR TO DEMOLITION.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF SIGNS AND SUPPORTS WITHIN THE WORK AREA, AS NECESSARY TO FACILITATE CONSTRUCTION. SIGNS SHALL BE PROTECTED OR STOCKPILED FOR REUSE AS SPECIFIED IN THE PLANS OR AS REQUIRED BY THE AGENCY OF JURISDICTION. THE CONTRACTOR SHALL REPLACE ANY DAMAGED SIGNS AND SUPPORTS AT NO ADDITIONAL COST TO THE OWNER.
10. THE CONTRACTOR SHALL NOTIFY MISS DIG, THE WHITE LAKE TOWNSHIP ENGINEER AND /OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
11. ALL SITE FEATURES WITHIN THE LIMIT OF DISTURBANCE INDICATED ON THIS PLAN ARE TO BE REMOVED/DEMOLISHED UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL NOTIFY KEM-TEC IF SIGNIFICANT DISCREPANCIES ARE DISCERNED BETWEEN THIS PLAN & FIELD CONDITIONS.
12. THE LOCATION OF ALL UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE BASED ON RECORDS PROVIDED BY THE UTILITY OWNERS AND VISIBLE EVIDENCE OBTAINED IN THE FIELD. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED TO THE COMPLETENESS OR ACCURACY THEREOF.

DEMOLITION LEGEND

- CONCRETE PAVEMENT REMOVAL
- PROPERTY LINE
- LOD — LIMITS OF DISTURBANCE

Know what's below. Call before you dig.

NORTH

DEMOLITION PLAN
SCALE: 1"= 20'

KEM-TEC
PROFESSIONAL ENGINEERING, SURVEYING & ENVIRONMENTAL SERVICES
A GROUP OF COMPANIES
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Grand Blanc (888) 694.0001
Ann Arbor (734) 994.2888
Detroit (313) 758.0677
www.kemtecgroupofccompanies.com

DEMOLITION PLAN

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGIE LAKE ROAD, WHITE LAKE TWP, MI, 48383

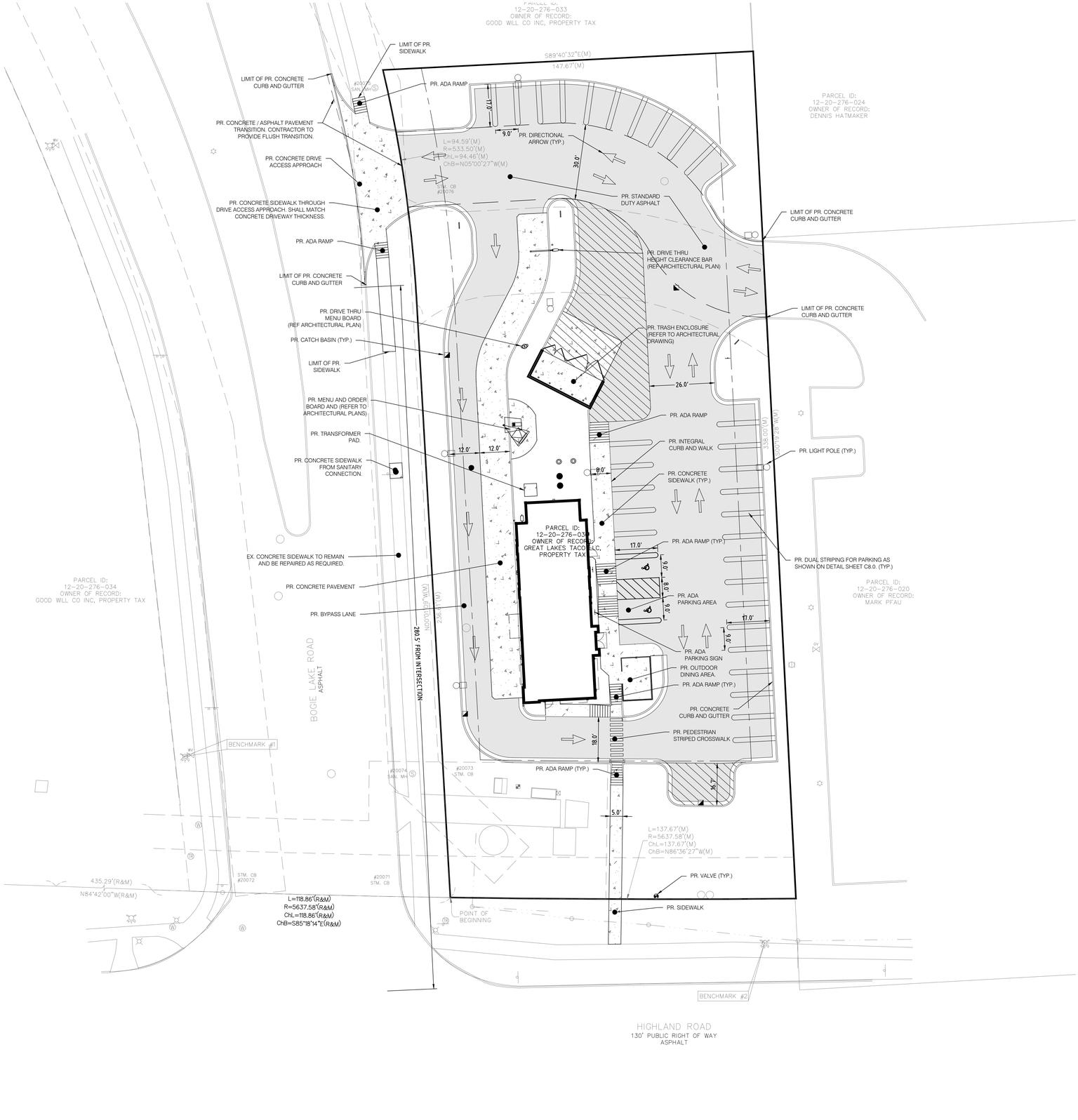
REVISION	DATE	BY	DESCRIPTION
6	05.03.2022	GAE	ENGINEERING REVIEW
6	03.24.2022	GAE	ENGINEERING REVIEW
5	02.28.2022	GAE	ENGINEERING REVIEW
4	02.01.2022	GAE	SITE PLAN APPROVAL
3	11.01.2021	GAE	SPA RESUBMISSION
2	08.02.2021	GAE	ENGINEERING SUBMISSION

DRAWN BY: GAE 05/03/2022
CHECKED BY:
DATE: MAY 03, 2022
SCALE: 1" = 20'
PROJECT NO: -00000

C2.0

STATE OF MICHIGAN
JOSEPH ROCCO DATTILO
ENGINEER
No. 6201049601
PROFESSIONAL ENGINEER

C2.0 Demolition Plan.dwg
July 2022
Plot: C2.0



SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED BUILDING
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED WATER STRUCTURES
- PROPOSED MANHOLE / CATCH BASIN

SITE NOTES

1. ALL LIGHTING SHALL BE SHIELDED AND DIRECTED DOWNWARD AND AWAY FROM ADJACENT PROPERTIES. LIGHTING SHALL MEET REQUIREMENTS OF THE LOCAL ZONING ORDINANCE. SEE LIGHTING PLAN FOR ADDITIONAL INFORMATION.
2. GROUND MOUNTED TRANSFORMERS AND ROOF MOUNTED MECHANICAL EQUIPMENT SHALL BE SCREENED AS REQUIRED IN THE LOCAL ZONING ORDINANCE.
3. ALL SIGNS TO MEET REQUIREMENTS OF CITY CODE OF ORDINANCES AND BE APPROVED BY BUILDING DEPARTMENT
4. PARKING SPACES SHALL BE STRIPPED PER LOCAL ZONING ORDINANCE
5. RESTORATION OF ANY EXISTING HARD SURFACE AREA, OF ANY TYPE, REQUIRED AS A RESULT OF REMOVAL OF EXISTING SURFACING BY WHITE LAKE TOWNSHIP FORCES OR AGENTS DURING THE COURSE OF MAINTENANCE OF WATER MAIN OR SANITARY SEWER LOCATED UNDER PAVEMENT, IS THE RESPONSIBILITY OF THE OWNER OF THIS SITE AND WILL NOT BE PERFORMED BY, NOR PAID FOR BY WHITE LAKE TOWNSHIP
6. THE SITE IS NOT ADJACENT TO ANY RESIDENTIALLY ZONED PROPERTY.
7. THE DEVELOPER SHALL BE REQUIRED TO REPAIR/REPLACE ANY BROKEN SECTIONS OF CONCRETE WITHIN THE FRONTAGE SIDEWALKS ADJACENT TO ADJACENT TO THE SITE ALONG BOGIE LAKE ROAD AND HIGHLAND ROAD, AS DETERMINED BY THE TOWNSHIP ENGINEERING CONSULTANT

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SITE LAYOUT AND PAVING PLAN

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGIE LAKE ROAD, WHITE LAKE TWP, MI, 48383

REVISION	DATE	BY	DESCRIPTION
6	06.03.2022	GAE	ENGINEERING REVIEW
7	04.27.2022	DM	SPA APPROVAL
6	04.26.2022	GAE	SPA APPROVAL
6	03.24.2022	GAE	ENGINEERING REVIEW
5	02.28.2022	GAE	ENGINEERING REVIEW
4	02.01.2022	GAE	SITE PLAN APPROVAL

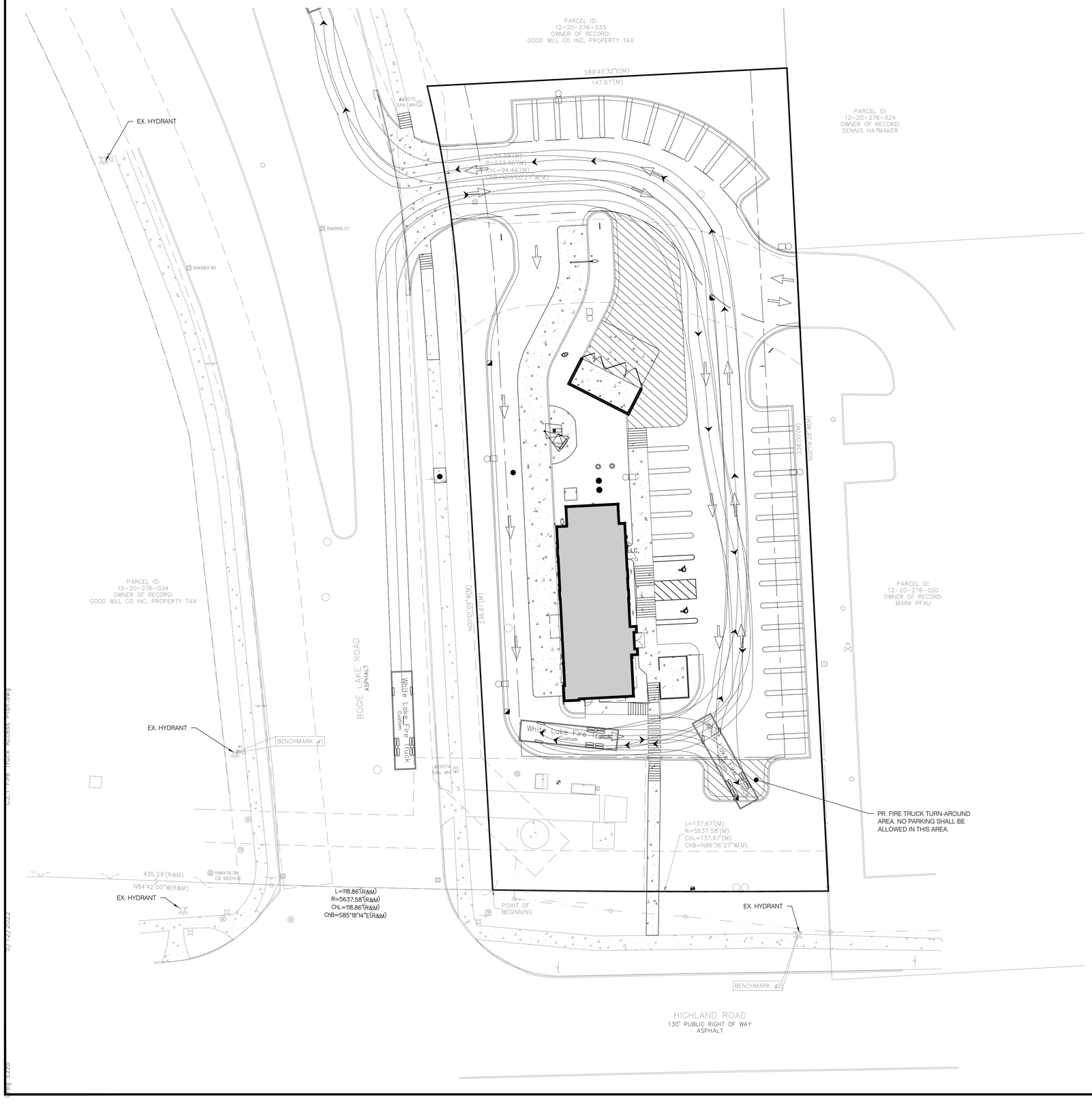
DRAWN BY: GAE 05/03/2022
CHECKED BY:
DATE: MAY 03, 2022
PROJECT NO: 00-00000
SCALE: 1" = 20'

C3.0

SITE LAYOUT AND PAVING PLAN

SCALE: 1"= 20'

C:\Users\Daniel Kagan\Desktop\Great Lakes Taco\C3.0 Site Layout & Paving Plan.dwg 5/18/2022



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Ann Arbor (734) 994.0888
Grand Blanc (888) 694.0001
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FIRE TRUCK ACCESS PLAN

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGIE LAKE ROAD, WHITE LAKE TWP, MI, 48383

REVISION	DATE	BY	DESCRIPTION
6	05.03.2022	GAE	ENGINEERING REVIEW
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5	02.28.2022	GAE	ENGINEERING REVIEW
4	02.01.2022	GAE	SITE PLAN APPROVAL
3	11.01.2021	GAE	SPA RESUBMISSION
1	6.14.2021	GAE	SPA SUBMISSION

STATE OF MICHIGAN
JOSEPH ROCCO DATTILO
ENGINEER
No. 6201049801
LICENSED PROFESSIONAL ENGINEER

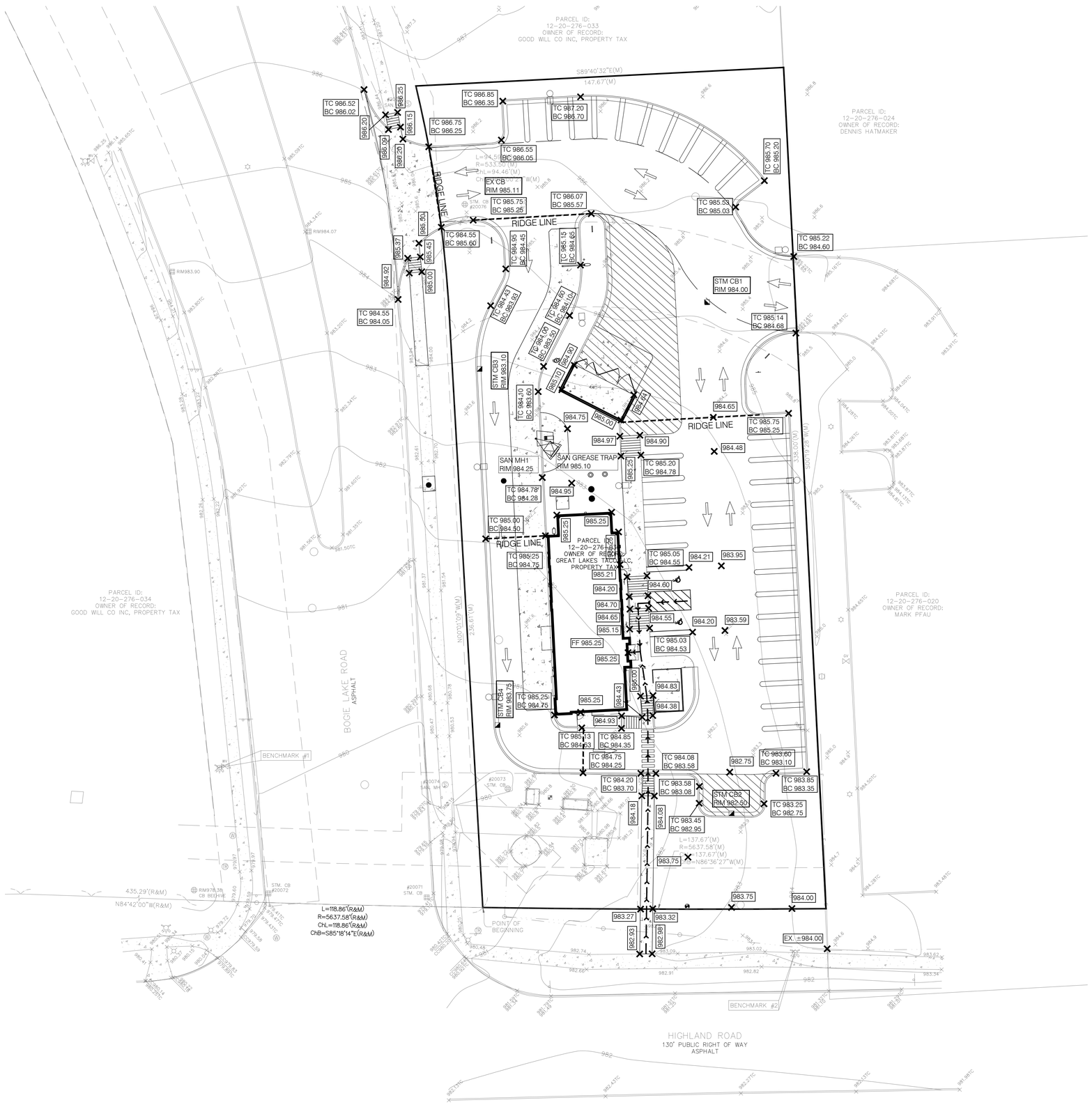
DRAWN BY: GAE
CHECKED BY:
DATE: MAY 03, 2022
PROJECT NO. 18-00000
SCALE: 1" = 20'

NORTH

FIRE TRUCK ACCESS PLAN
SCALE: 1"= 20'

C3.1

C3.1 Fire Truck Access Plan.dwg
5/12/2022
Greg Cazar


PARCEL ID:
12-20-276-033
OWNER OF RECORD:
GOOD WILL CO INC, PROPERTY TAX
S89°40'32"E(M)
147.67'(M)
PARCEL ID:
12-20-276-024
OWNER OF RECORD:
DENNIS HATMAKER
PARCEL ID:
12-20-276-034
OWNER OF RECORD:
GOOD WILL CO INC, PROPERTY TAX
PARCEL ID:
12-20-276-020
OWNER OF RECORD:
MARK PFAU
PARCEL ID:
12-20-276-026
OWNER OF RECORD:
GREAT LAKES TACO, LLC,
PROPERTY TAX
RIDGE LINE
EX CB
RIM 985.11
STM. CB
#20076
STM CB1
RIM 984.00
STM CB3
RIM 983.10
STM CB4
RIM 983.75
STM CB2
RIM 982.50
SAN MH1
RIM984.25
SAN GREASE TRAP
RIM 985.10
L=94.56'(M)
R=533.50'(M)
ChL=94.46'(M)
ChB=S84°55'47"W(M)
N00°01'09"W(M)
236.61'(M)
S00°01'09"E(M)
335.01'(M)
435.29'(R&M)
N84°42'00"W(R&M)
L=118.86'(R&M)
R=5637.58'(R&M)
ChL=118.86'(R&M)
ChB=S85°18'14"E(R&M)
L=137.67'(M)
R=5637.58'(M)
137.67'(M)
ChB=N86°36'27"W(M)
POINT OF BEGINNING
BENCHMARK #1
BENCHMARK #2
BOGIE LAKE ROAD
ASPHALT
HIGHLAND ROAD
130' PUBLIC RIGHT OF WAY
ASPHALT
RIM984.07
RIM983.90
RIM978.38
CB BEEHIVE
#20074
STM. MH
#20073
STM. CB
#20071
STM. CB
TC 986.52
BC 986.02
TC 986.85
BC 986.35
TC 987.20
BC 986.70
TC 986.75
BC 986.25
TC 986.55
BC 986.05
TC 985.70
BC 985.20
TC 985.53
BC 985.03
TC 985.22
BC 984.60
TC 986.07
BC 985.57
TC 985.75
BC 985.25
TC 984.55
BC 985.60
TC 984.55
BC 984.45
TC 985.15
BC 984.65
TC 984.55
BC 984.05
TC 984.43
BC 983.93
TC 984.60
BC 984.14
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TC 985.14
BC 984.68
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BC 984.25
TC 984.08
BC 983.58
TC 984.20
BC 983.70
TC 983.58
BC 983.08
TC 983.45
BC 982.95
TC 983.60
BC 983.10
TC 983.85
BC 983.35
TC 983.25
BC 982.75
FF 985.25
EX. ±984.00
984.65
984.75
985.00
984.97
984.90
984.48
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984.95
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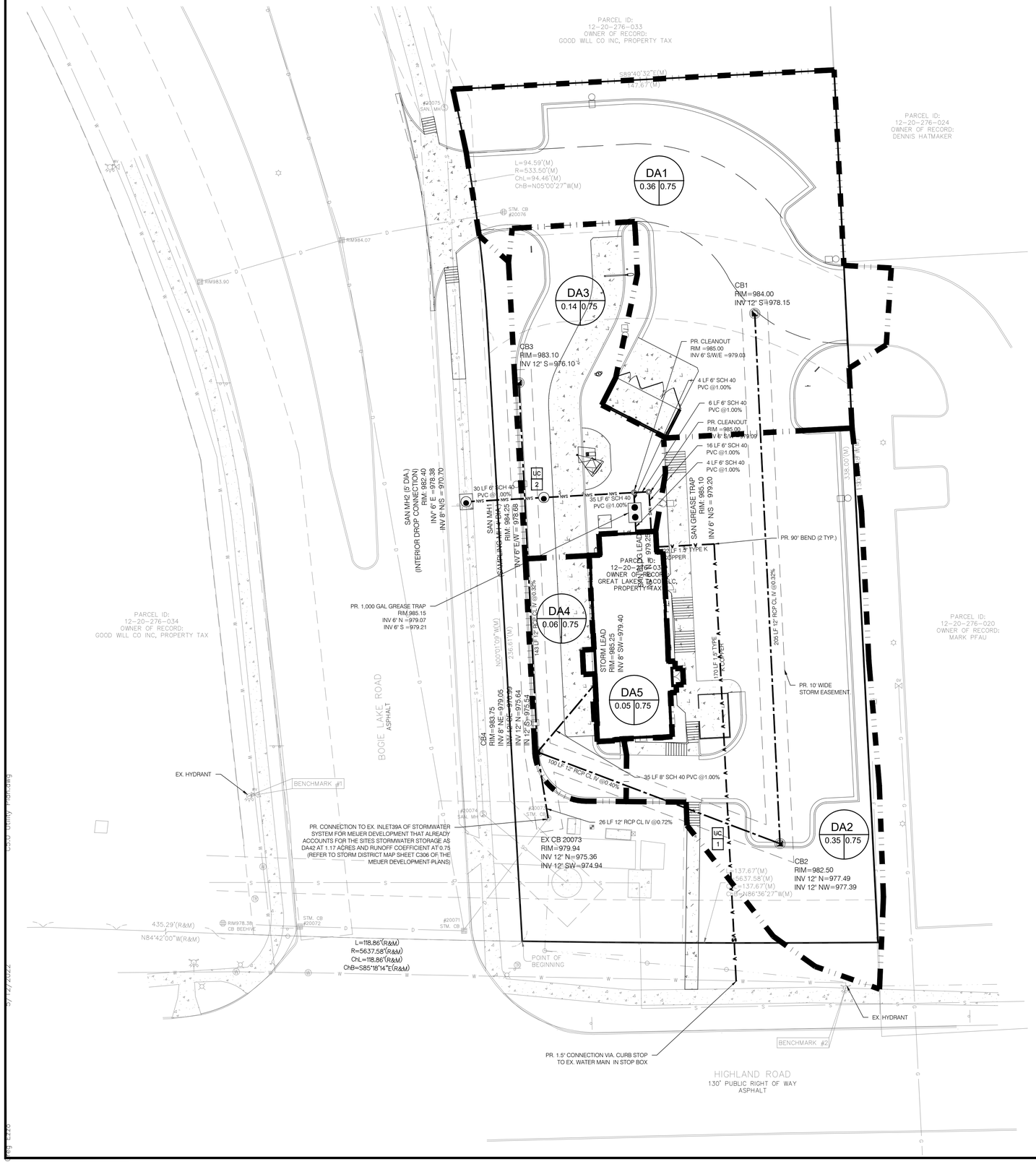
985



UTILITY LEGEND

- SAN — PROPOSED SANITARY LINE
- W — PROPOSED WATER LINE
- PROPOSED STORMWATER PIPING
- PROPOSED CATCH BASIN STRUCTURE
- PROPOSED MANHOLE STRUCTURE / WATER QUALITY UNIT
- PROPOSED WATER STRUCTURES
- PROPOSED SANITARY CLEANOUT

02.28.2022

STORM SEWER CALCULATIONS

Qr = C * I * A
Qp = A x 1.486/nxR^(2/3)x$^{1/2}$
I = 175/(T+25) for 10 year storm event
T = 15 Minutes

AREA NO.	FROM MH/CB	TO MH/CB	Area A acres	AVG. COEFF. C*	A x C	Area TOTAL At	COEFF Wt Cw	At x Cw	TIME Tc min	INT I in/hr	n	FLOW Qr Q=CIA c.f.s	PIPE CAP. Qp c.f.s	PIPE LENGTH ft	PIPE DIA. In	PIPE SLOPE %	VEL. FULL ft/s	TIME FLOW min	RIM ELEV. HIGH ft	RIM ELEV. LOW ft	HIGH END H.G.L	LOW END H.G.L	HIGH END INVERT ft	LOW END INVERT
DA1	CB1	CB2	0.36	0.75	0.27	0.36	0.75	0.27	15.00	4.38	0.0130	1.18	2.02	205	12	0.32	2.5660	1.33	984.00	982.50	978.95	978.29	978.15	977.49
DA2	CB2	CB4	0.35	0.75	0.26	0.71	0.75	0.53	16.33	4.23	0.0130	2.25	2.25	100	12	0.40	2.8690	0.58	982.50	983.75	978.19	977.79	977.39	976.99
									16.91															
DA5	BLDG	CB4	0.05	0.75	0.04	0.05	0.75	0.04	16.91	4.18	0.0130	0.16	1.22	35	8	1.00	3.4700	0.17	985.25	983.75	979.93	979.58	979.40	979.05
									17.08															
DA3	CB3	CB4	0.14	0.75	0.11	0.14	0.75	0.11	15.00	4.38	0.0130	0.46	2.02	143	12	0.32	2.5660	0.93	983.10	983.75	976.90	976.44	976.10	975.64
DA4	CB4	EX CB	0.06	0.75	0.05	0.06	0.75	0.72	16.91	4.18	0.0130	3.01	3.02	26	12	0.72	3.8490	0.11	983.75	979.94	976.34	976.16	975.54	975.36
									17.03															

UTILITY NOTES

1. ALL CONSTRUCTION PROCEDURES AND MATERIALS SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF WHITE LAKE TOWNSHIP A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED BY WHITE LAKE TOWNSHIP AND HELD PRIOR TO THE START OF CONSTRUCTION.
2. CONTRACTOR MUST CONTACT MISS DIG (811) AT LEAST THREE WORKING DAYS PRIOR TO THE START OF CONSTRUCTION FOR UNDERGROUND UTILITY LOCATIONS. ALL UTILITIES SHALL BE STAKED BEFORE CONSTRUCTION BEGINS.
3. ALL WATER MAIN EASEMENTS SHALL BE PROVIDED PRIOR TO CONSTRUCTION AND ACCEPTANCE OF THE WATER DISTRIBUTION SYSTEM.
4. WATER MAINS SHALL BE CONSTRUCTED WITH A MINIMUM COVER OF 6 FEET BELOW FINISHED GRADES, INCLUDING OPEN DRAINAGE COURSES.
5. ALL TRENCHES UNDER OR WITHIN A 1:1 RATIO OF EXISTING OR PROPOSED PAVEMENT OR DRIVEWAYS, SHALL BE BACKFILLED WITH COMPACTED CLASS II SAND TO GRADE (95% MAXIMUM UNIT DENSITY).
6. WHERE TWO UTILITIES CROSS, PROVIDE CLASS II BACKFILL MATERIAL IN SIX (6) INCH COMPACTED LAYERS TO TOP HIGHEST UTILITY.
7. WHERE WATER MAINS DIP UNDER OTHER UTILITIES, THE SECTIONS WHICH ARE DEEPER THAN NORMAL SHALL BE CONSTRUCTED WITH 11-1/4" VERTICAL BENDS, 22 ½° OR 45° BENDS MUST BE RODDED AND PROPERLY ANCHORED.
8. ALL PRECAST CONCRETE GATE WELL SECTIONS SHALL BE IN ACCORDANCE WITH A.S.T.M. C478, STANDARD SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS. WALL THICKNESS SHALL BE AS SHOWN ON THESE DETAILS. ALL JOINTS FOR PRECAST CONCRETE GATE WELL SECTIONS SHALL BE "MODIFIED GROOVE TONGUE" WITH GASKET MANUFACTURED TO CONFORM WITH A.S.T.M. C443, STANDARD SPECIFICATION FOR JOINTS FOR CIRCULAR CONCRETE SEWER AND CULVERT PIPE USING RUBBER GASKETS.
9. CONTRACTOR SHALL INSTALL VALVES, TAPPING SLEEVES, AND GATE WELL STRUCTURES IN STRICT COMPLIANCE WITH MEASUREMENTS PROVIDED ON SHEET 1 (2'-0" BETWEEN GATE WELL WELL AND CENTERLINE OF OPERATING NUT) TO ALLOW PROPER OPERATION OF VALVE THROUGH GATE WELL OPENING.
10. ALL CROSS-CONNECTION CONTROL DEVICES SHALL BE INSTALLED AS REQUIRED BY THE WHITE LAKE TOWNSHIP PLUMBING INSPECTOR AND IN ACCORDANCE WITH THE STANDARDS OF THE OAKLAND COUNTY COUNTY DRAIN COMMISSIONER OPERATION AND MAINTENANCE DIVISION AND THE MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF DRINKING WATER AND RADIOLOGICAL PROTECTION.
11. ALL FITTINGS AND BENDS SHOULD BE BLOCKED IN ACCORDANCE WITH THRUST BLOCK DETAILS, UNLESS ALTERNATE THRUST RESTRAINT SYSTEM, AS INDICATED PLANS AND SPECIFICATIONS, IS APPROVED BY WHITE LAKE TOWNSHIP DEPARTMENT OF PUBLIC SERVICES.
12. THE STORMWATER DISCHARGE FOR THE OUTLET DEVELOPMENT IS OUTLETING INTO INTO EX CB20073. THIS SYSTEM TAKES THE DRAINAGE TO THE EXISTING RETENTION POND (SEE MEIJER DEVELOPMENT PLAN SHEET C303B). THIS POND IS SELF CONTAINED AS SHOWN ON THE EXISTING DRAWINGS AND DOES NOT OUTLET INTO ANY DRAIN OWNED BY WHITE LAKE TOWNSHIP OR OAKLAND COUNTY. THEREFORE ADDITIONAL WATER TREATMENT FOR THE OUTLET DEVELOPMENT ONLY WILL NOT BE PROVIDED.

UTILITY QUANTITIES

12" RCP CL IV STORM PIPE	474 LF
8" sch 40 PVC ROOF LEAD	35 LF
1.5" TYPE K COPPER PIPE	192 LF
6" SCH 40 PVC SAN. PIPE	95 LF
1,000 GAL GREASE TRAP	1
SANITARY MANHOLE	2
CATCH BASIN	4
CLEANOUT STRUCTURE	2
CURB STOP	1
90° BEND	1

UTILITY CROSSING SCHEDULE

UC 1 — GRADE 983.50 ±
TOP OF 12" STORM 678.30
12" STORM INVERT 977.30
BOTTOM OF 1.5" WATER 975.80
(WATERMAIN DIPPED WITH MIN. CLEARANCE 1.5 FT, DIPPING/DEFLECTING OF THE WATERMAIN SHALL FOLLOW APPLICABLE AGENCY STANDARDS)

UC 2 — 6" SAN INVERT 978.61
TOP OF 12" STORM 976.96
12" STORM INVERT 975.96
TOTAL CLEARANCE OF 1.65 FT

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UTILITY PLAN

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGIE LAKE ROAD, WHITE LAKE TWP, MI, 48383

STATE OF MICHIGAN
LICENSED PROFESSIONAL ENGINEER
JOSEPH ROCCO DATTILO
ENGINEER
No. 6201049801

Know what's below. Call before you dig.

NORTH

UTILITY PLAN
SCALE: 1"= 20'

REVISION	DATE	BY	DESCRIPTION
7	05.03.2022	GAE	ENGINEERING REVIEW
6	03.24.2022	GAE	ENGINEERING REVIEW
5	02.28.2022	GAE	ENGINEERING REVIEW
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2	08.02.2021	GAE	ENGINEERING SUBMISSION
1	6.14.2021	GAE	SPA SUBMISSION

DRAWN BY: GAE
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05/03/2022

C5.0

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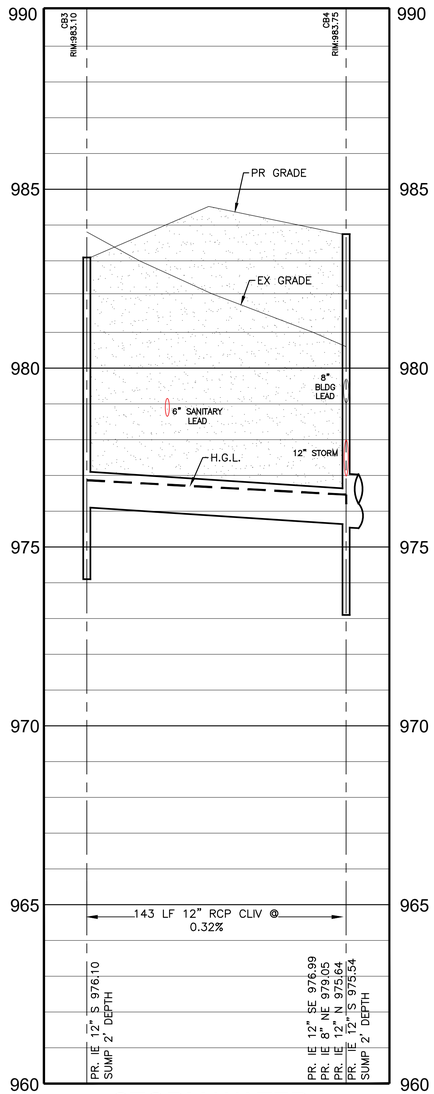
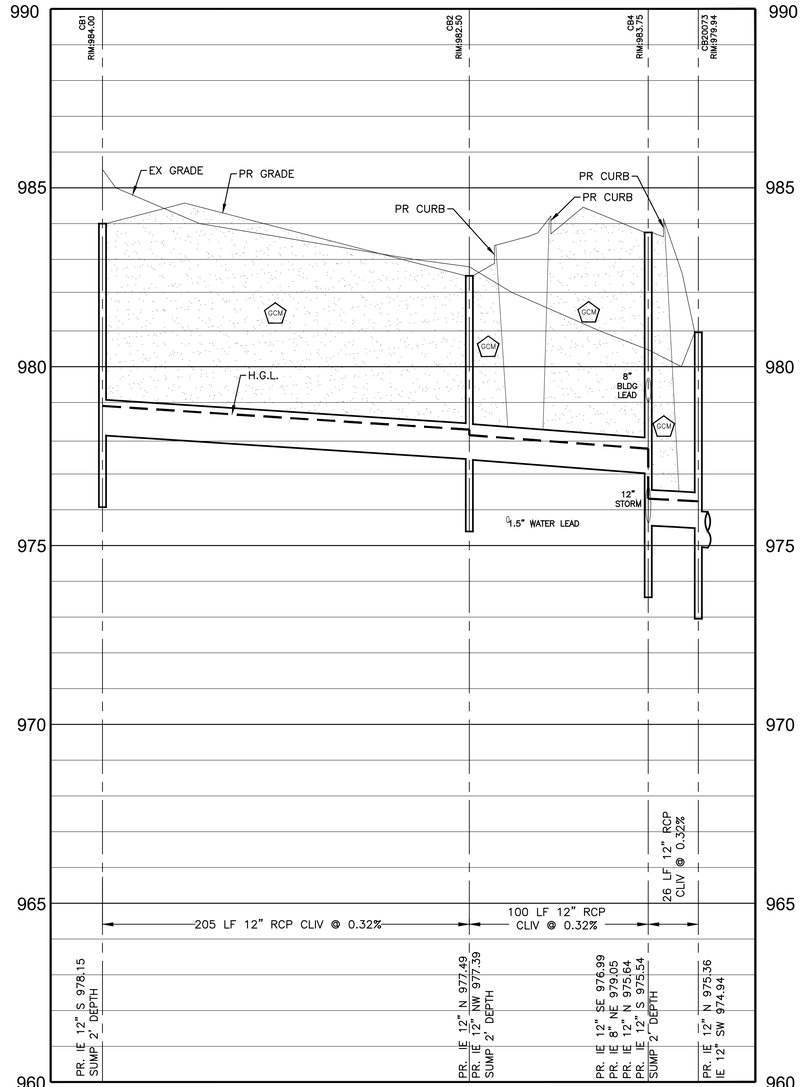


STORM WATER
PROFILE CB3 - CB4

SCALE: 1"= 40' HOR / 1" = 2' VERT



STORM WATER PROFILE CB1-CB 20073

SCALE: 1"= 40' HOR / 1" = 2' VERT

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PROFILES

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGE LAKE ROAD, WHITE LAKE TWP., MI, 48383

NO.	DATE	BY	DESCRIPTION
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SCALE: 1" = 20'
PROJECT NO. 18-00000

C6.0

C6.0 Profile Plan.dwg
5/13/2022
Daniel Krupp

SOIL EROSION LEGEND

- PROPERTY LINE
- LOD — PROPOSED LIMIT OF DISTURBANCE
- SF — PROPOSED SILT FENCE
- PROPOSED INLET FILTER

SOIL EROSION & SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

CONSTRUCTION SEQUENCE	NOV 2021	DEC	JAN	FEB
TEMPORARY EROSION CONTROL MEASURES				
STRIP & STOCKPILE TOPSOIL / ROUGH GRADE				
STORM SEWER				
FOUNDATION / BLDG. CONSTRUCTION				
SANITARY SEWER & WATER MAIN				
INSTALL ALL OTHER UTILITIES				
SITE CONSTRUCTION & PAVEMENT				
PERMANENT EROSION CONTROL MEASURES				
FINISH GRADING				

DISTURBED AREA =1.06± ACRES

SOIL TYPE INFORMATION

MAP UNIT SYMBOL	MAP UNIT NAME
50B	UDIPSAMMENTS, UNDULATING

MAINTENANCE OF EROSION CONTROL DEVICES

1. FILTERS MUST BE CLEANED PERIODICALLY SO THEY DON'T CLOGGED.
2. FILTER FENCING WHICH SAGS, FALLS OVER OR IS NOT STAKED IN, SHOULD BE PROMPTLY REPAIRED OR REPLACED.
3. SILT FENCES SHOULD BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND SEVERAL TIMES DURING PROLONGED RAINFALLS.
4. IF THE FENCE IS SAGGING OR THE SOIL HAS REACHED ONE HALF THE HEIGHT OF THE FABRIC, THE SOIL BEHIND THE FABRIC MUST BE REMOVED.
5. MULCHED AREAS SHOULD BE CHECKED FOLLOWING EACH RAIN TO ENSURE THE MULCH IS STAYING IN PLACE. ADDITIONAL TACKING MATERIALS OR NETTING MAY NEED TO BE APPLIED TO HOLD THE MULCH IN PLACE.
6. NEWLY SEEDED AREAS NEED TO BE INSPECTED FREQUENTLY FOR THE FIRST FEW MONTHS TO ENSURE THE GRASS IS GROWING. IF THE SEEDED AREA IS DAMAGED DUE TO RUNOFF, ADDITIONAL STORMWATER MEASURES MAY BE NEEDED.

STATE OF MICHIGAN
JOSEPH ROCCO DATTILO
ENGINEER
No. 6201049801
LICENSED PROFESSIONAL ENGINEER

Know what's below. Call before you dig.

NORTH

SOIL EROSION & SEDIMENTATION CONTROL PLAN

SCALE: 1"= 20'

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SOIL EROSION AND SEDIMENTATION CONTROL PLAN

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HIGHLAND (M-59) & BOGIE LAKE ROAD, WHITE LAKE TWP, MI, 48383

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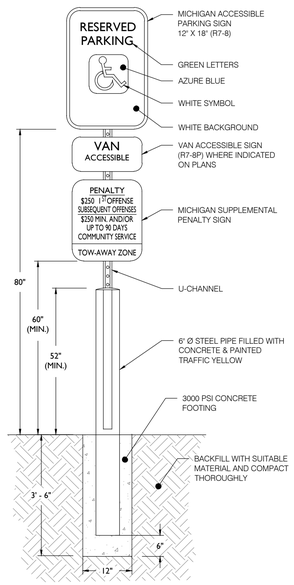
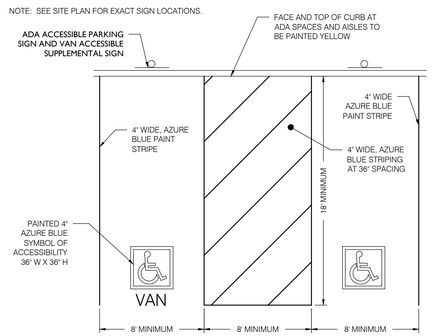
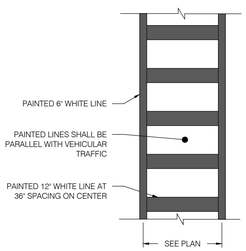
C7.0



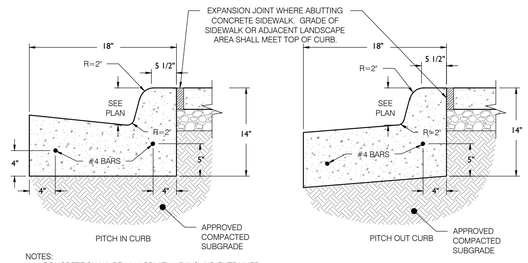
SIGN DETAILS



ACCESSIBLE PARKING STALL MARKINGS

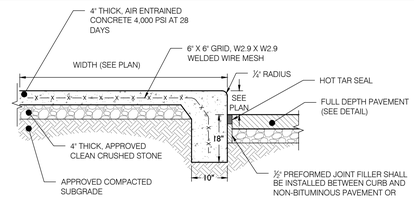


CROSSWALK DETAIL



NOTES:
1. CONCRETE SHALL BE 3500 PSI AT 28 DAYS, AIR-ENTRAINED.
2. TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED ½" FROM SURFACE.
3. HALF DEPTH CONTRACTION JOINTS SHALL BE PROVIDED AT 10 FOOT INTERVALS.
4. 14" CURB DEPTH SHALL BE MAINTAINED AT DEPRESSED OR FLUSH CURBED AREAS.

CONCRETE CURB AND GUTTER DETAIL



NOTES:
1. MAXIMUM CROSS SLOPE SHALL BE ½" PER FOOT.
2. ½" EXPANSION JOINTS SHALL BE PROVIDED AT 12' INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED ½" FROM THE SURFACE.
3. 1" DEEP BY ½" WIDE, TOOLED CONTRACTION JOINTS SHALL BE PROVIDED AT 4' INTERVALS.

INTEGRAL CONCRETE CURB DETAIL

WHITE LAKE TOWNSHIP NOTES

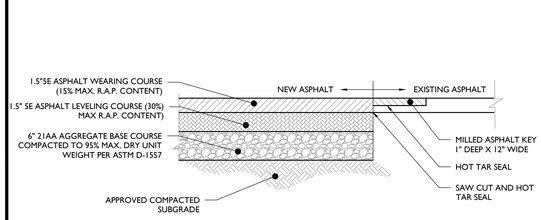
a. All construction shall be in accordance with the Township's current standards and specifications.

b. The Contractor shall notify the Township Engineer and/or the authority having jurisdiction, 48 hours prior to the beginning of construction.

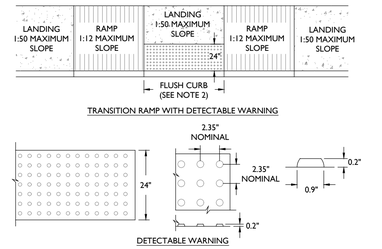
c. Contractor shall contact MISS DIG at 800-482-7171, 72 hours in advance of construction, for existing underground utility locations.

d. In order to verify compliance with approved plans, full-time construction observation will generally be required during all phases of underground site construction including installation of sanitary sewer, storm sewers, drains, watermains and appurtenances as well as private street curbing and paving construction. Intermittent observations will be made for site grading, parking lot curbing and paving, retaining wall construction and other surface activity.

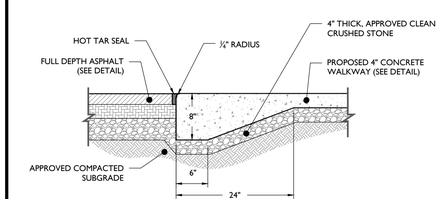
EXISTING DRIVE CONNECTION TO THE EAST SHALL BE BLOCKED OFF DURING CONSTRUCTION SO AS TO PREVENT VEHICLES FROM THIS SITE FROM ENTERING ONTO AND CUTTING ACROSS THE TACO BELL SITE DURING CONSTRUCTION.



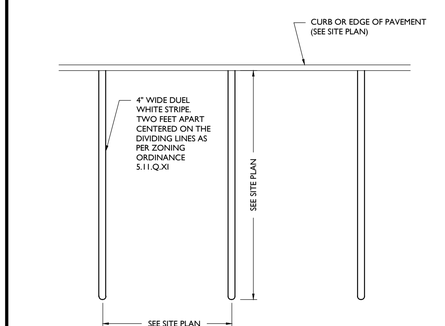
FULL DEPTH ASPHALT PAVEMENT DETAIL



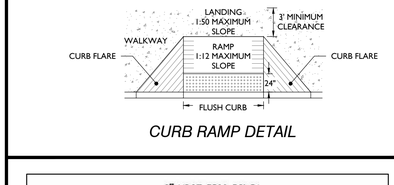
TRANSITION RAMP DETAIL



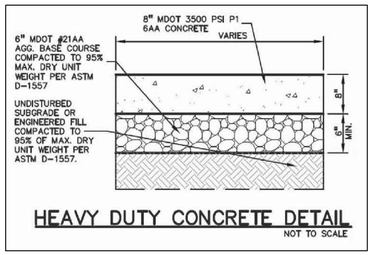
CONCRETE PAVEMENT TO ASPHALT TRANSITION DETAIL



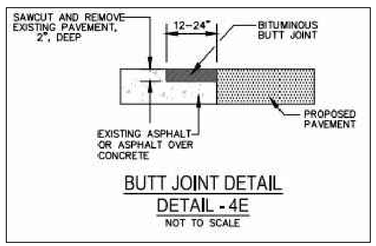
PARKING STALL MARKINGS
NOT TO SCALE



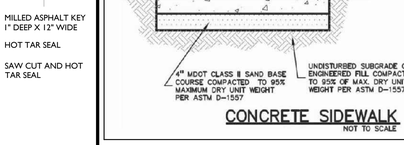
CURB RAMP DETAIL



HEAVY DUTY CONCRETE DETAIL
NOT TO SCALE



BUTT JOINT DETAIL
DETAIL - 4E
NOT TO SCALE



CONCRETE SIDEWALK
NOT TO SCALE

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DETAILS SHEET

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGIE LAKE ROAD, WHITE LAKE TWP., MI, 48383

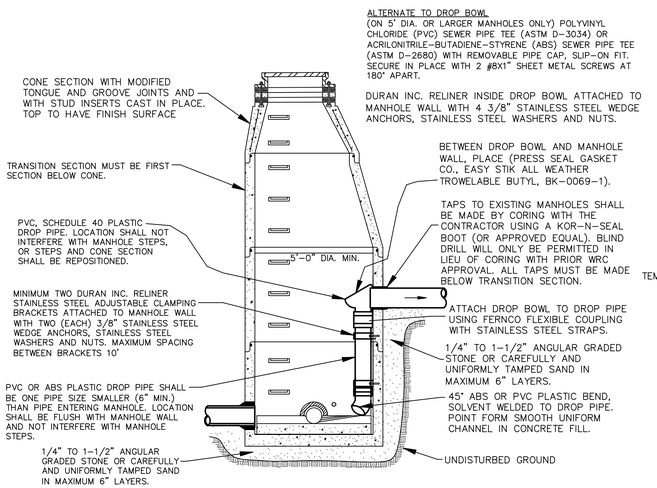
NO.	DATE	BY	DESCRIPTION
6	05.03.2022	GAE	ENGINEERING REVIEW
6	03.24.2022	GAE	ENGINEERING REVIEW
5	02.28.2022	GAE	ENGINEERING REVIEW
4	02.01.2022	GAE	SITE PLAN APPROVAL
3	11.01.2021	GAE	SPA RESUBMISSION
2	08.02.2021	GAE	ENGINEERING SUBMISSION

DRAWN BY: GAE 05/03/2022
CHECKED BY:
DATE: MAY 03, 2022
PROJECT NO. 00-00000
SCALE: NOT TO SCALE

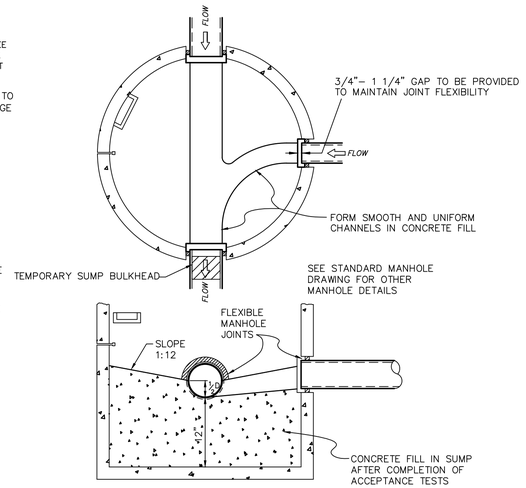
STATE OF MICHIGAN
JOSEPH ROCCO DATTILO
ENGINEER
No. 6201043601
PROFESSIONAL ENGINEERS

C8.0

C8.0 Detail Sheet.dwg
5/13/2022
Daniel Kagan

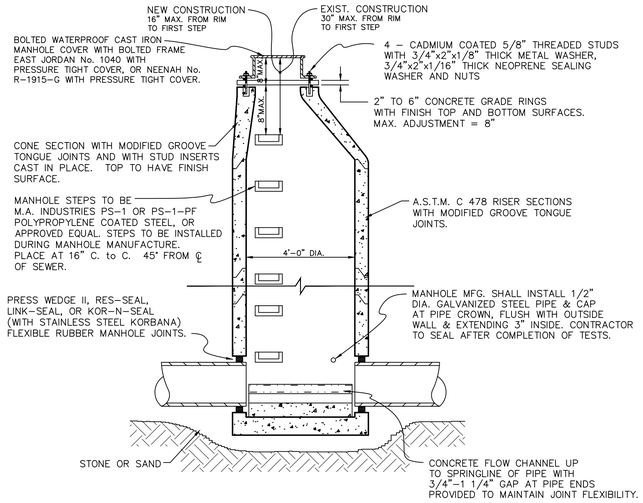


INTERIOR DROP CONNECTION



Drawing not to scale.

SUMP MANHOLE FOR TESTING, CLEANING, AND DEWATERING



Drawing not to scale.

STANDARD MANHOLE ON 8" THROUGH 24" DIAMETER SEWERS

SANITARY SEWER CONSTRUCTION NOTES

1. All construction shall conform to the current standards and specifications of the local unit of government and the Oakland County Water Resources Commissioner (OCWRC). All sanitary sewer construction shall have full time inspection supervised by a professional engineer provided by or caused to be provided by the local unit of government.

2. At all connections to Oakland County Water Resources Commissioner's sewers or extensions, and before start of construction, the Contractor must obtain a Sewer Inspection Permit issued by the OCWRC. Gravity sewer permit charges are $250.00 for each connection plus $25.00 for each manhole constructed. Pressure sewer permit charges are $250.00 per 2460 L.F. of force main with a minimum permit fee of $250.00. Failure to pass any test segment will result in an additional charge to the Contractor for each retest, in accordance with the above price schedule. The Contractor shall also have posted with the OCWRC a $5,000.00 surety bond and $500.00 cash deposit. The Contractor shall notify the local unit of government and the OCWRC (248-858-1110) 24 hours prior to the beginning of any construction. Final acceptance tests must be witnessed by County personnel and must be scheduled by Municipality or it's consultant in advance with 24 hour notice at 248-858-1110.

3. No sewer installation shall have an infiltration or exfiltration exceeding 100 gallons per inch diameter per mile of pipe in a 24 hour period, and no single run of sewer between manholes shall exceed 100 gallons per inch diameter per mile. Air tests in lieu of infiltration tests shall be as specified in the OCWRC "Acceptance Tests", dated September, 1972. Only pipe and pipe joints approved by the Oakland County Water Resources Commissioner may be used for sanitary sewer construction.

4. Located in the first manhole upstream from the point of all connections to an existing OCWRC sewer, or extension thereto, a temporary 12-inch deep sump shall be provided in the first manhole above the connection which will be filled in after such successful completion of any acceptance test up to the standard fillet provided for the flow channel. A watertight bulkhead shall be provided on the downstream of the sump manhole.

5. All building leads and risers shall be 6-inch S.D.R. 23.5 ABS OR PVC pipe with chemically fused joints, or an approved equal pipe and joint. Sewer pipe wye shall contain factory installed premium joint material of an approved type compatible with that of the building lead pipe used. Building leads to be furnished with removable air tight and water-tight stoppers.

6. All rigid sewer pipe shall be installed in Class "B" bedding or better. All flexible, semi-flexible or composite sewer pipe shall be installed in conformance to the Oakland County Water Resources Commissioner specifications.

7. All new manholes shall have Oakland County Water Resources Commissioner approved flexible, water-tight seals where pipes pass through walls. Manholes shall be of precast sections with modified groove tongue and rubber gasket type joints. Precast manhole cone sections shall be Oakland County Water Resources Commissioner approved modified eccentric cone type. All manholes shall be provided with bolted, water-tight covers.

8. At all connections to manholes on Oakland County Water Resources Commissioner's sewers or extensions thereto drop connections will be required when the difference in invert elevations exceeds 18-inches. Outside drop connections only will be approved.

9. Taps to existing manholes shall be made by coring. The Contractor shall place a KOR-N-SEAL boot (or OCWRC approved equal) after coring is completed. Blind drilling will not be permitted in lieu of coring.

10. New manholes constructed directly on Oakland County Water Resources Commissioner's sewers shall be provided with covers reading "Oakland County - Sanitary" in raised letters. New manholes built over an existing sanitary sewer shall have monolithic poured bottoms.

11. No ground water, storm water, construction water, downspout drainage or weep tile drainage shall be allowed to enter any sanitary sewer installation.

12. Prior to excavation, the Contractor shall telephone MISS DIG (647-7344) for the location of underground pipeline and cable facilities, and shall also notify representatives of other utilities located in the vicinity of the work.

13. 18" minimum vertical separation and 10' minimum horizontal separation must be maintained between sanitary sewer and water main.

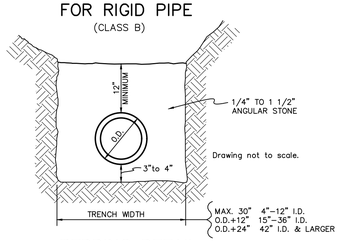
14. Manhole frame and cover shall be as follows: East Jordan heavy manhole cover, base flange type #1040 or Neenah Foundry heavy duty #R-1642 manhole frame. Solid lid cover shall be non-rocking and marked "WHITE LAKE TOWNSHIP SEWER DEPARTMENT."

Drawing not to scale.

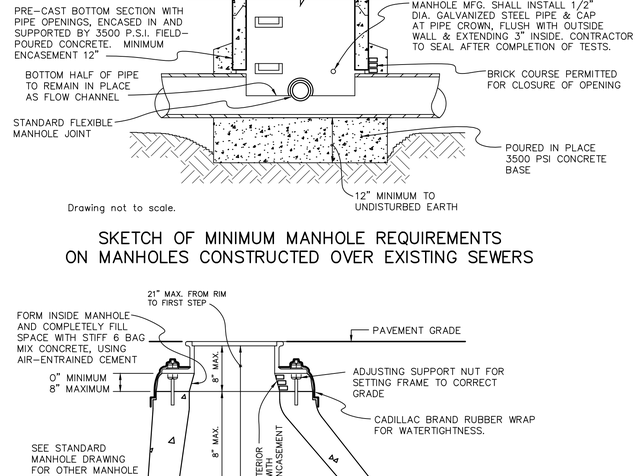
HOUSE/BUILDING LEAD DETAIL

BEDDING DETAIL FOR RIGID PIPE

(CLASS B)

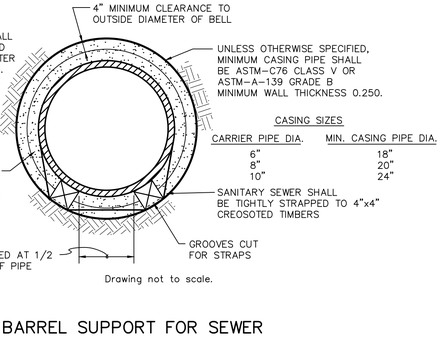


BEDDING DETAIL FOR FLEXIBLE PIPE



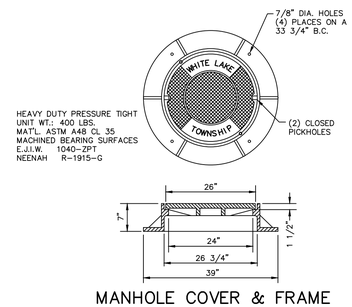
Drawing not to scale.

SKETCH OF MINIMUM MANHOLE REQUIREMENTS ON MANHOLES CONSTRUCTED OVER EXISTING SEWERS

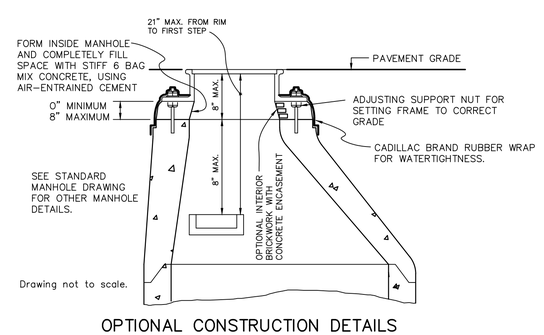


Drawing not to scale.

PIPE BARREL SUPPORT FOR SEWER



MANHOLE COVER & FRAME



Drawing not to scale.

OPTIONAL CONSTRUCTION DETAILS

DRAWN: CAD
DESIGN: OA
CHECKED: -

SCALE: VERT. -
HORZ. AS NOTED

REVISIONS	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE
		FIRST ISSUE	09/11/97		OCWRC COMMENTS	11/06/15			
		UPDATED TITLE BLOCK	04/30/13						
		UPDATED NOTES	02/17/15						

Johnson&Anderson

4494 Elizabeth Lake Road
Waterford, Michigan 48328
tel (248) 681-7800 fax (248) 681-2660

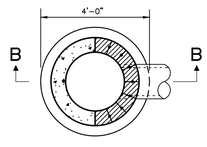
1060 W. Norton Avenue, Suite 7
Muskegon, Michigan 49441
tel (231) 780-3100 fax (231) 780-3115

2291 Water Street, Suite 6
Port Huron, Michigan 48060
tel (810) 987-7820 fax (810) 987-7895

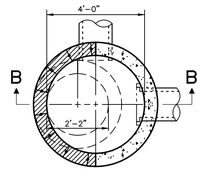
White Lake Township
7525 Highland Road (M-59)
White Lake, Michigan 48383
248-698-3300

SANITARY SEWER STANDARD DETAILS

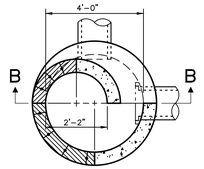
JOB NO.
DATE ISSUED 09/11/97
SHEET NO.



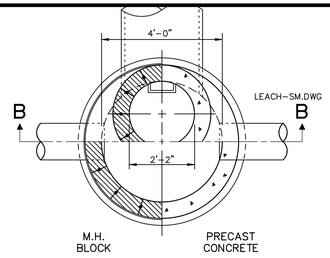
SECTION A–A



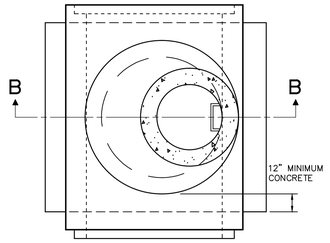
SECTION A–A



SECTION A–A

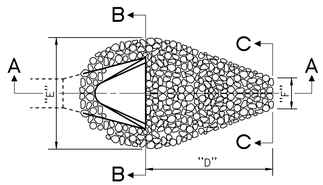


SECTION A–A



SECTION A–A

PIPE DIA.	"D"	"E"	"F"	S.Y.
12"	5'–0"	6'–6"	3'–0"	4
15"	5'–0"	7'–0"	3'–0"	4
18"	5'–0"	7'–6"	3'–6"	4
21"	5'–6"	8'–0"	4'–0"	5
24"	6'–0"	8'–6"	4'–6"	6
27"	6'–6"	9'–0"	5'–0"	7
30"	7'–0"	9'–9"	5'–6"	8
33"	7'–6"	10'–3"	5'–6"	9
36"	8'–0"	10'–9"	6'–0"	10
42"	9'–0"	11'–9"	6'–6"	12
48"	10'–0"	13'–0"	7'–0"	14



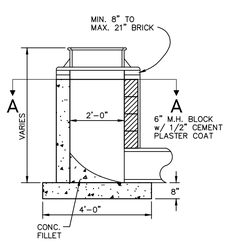
PLAN VIEW

STORM SEWER NOTES

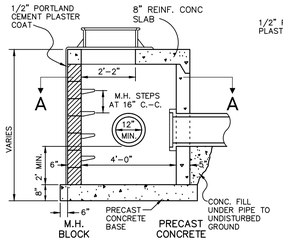
1. PRECAST CONC. RISERS SHALL MEET A.S.T.M. C478
2. DIAMETER OF CONC. BASE: I.D. + 2(WALL) + 8"
3. MANHOLE STEP SPACING SHALL MEET MIOSHA REQUIREMENTS. NO MORE THAN 21" FROM RIM TO FIRST STEP. MAX. 16" O.C. STEPS SHALL BE CAST POLYPROPYLENE REINFORCED WITH A 1/2" STEEL ROD.
4. WALL THICKNESS OF BLOCK STRUCTURES SHALL BE:

DEPTH	THICKNESS
0–8'	6"
8–15'	8"
OVER 15'	12"

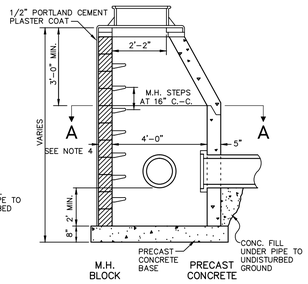
5. MINIMUM I.D. OF STRUCTURE FOR: 36"to 42" = 5'–0"
   48"to 54" = 6'–0"
   LARGER DIAMETER STRUCTURES MAY BE REQUIRED DEPENDING ON PIPING CONFIGURATION.
6. ALL LIFTING HOLES AND VOIDS IN INTERIOR JOINTS SHALL BE FILLED BY MORTAR.
7. THE FINGER DRAIN DETAIL SHALL BE USED AT ALL LOW POINT CATCH BASINS IN PAVEMENT AREAS. THE DETAIL MAY BE OMITTED WITH THE APPROVAL OF THE TOWNSHIP ENGINEER IN AREAS WITH VERY POROUS SOILS AND NO GROUNDWATER PROBLEMS.
8. PRECAST ONE PIECE BASES AND RISERS ARE ACCEPTABLE FOR INLETS, CATCH BASINS AND MANHOLES
9. FRAMES & COVERS WITH INLET CAPACITY (1.0 CFS/90 SQ IN)
   –TRAFFIC AND PARKING AREAS: MDOT "D" (EJIW 5105) 1.9 CFS*
   –REAR YARD AND DITCH INLETS: (EJIW 1040–02) 2.1 CFS*
   –MANHOLES: MDOT "A" (EJIW 1060)
   –CURB AND GUTTER INLETS: MDOT "K" (EJIW 7045) 1.8 CFS*
   –MOUNTABLE CURB & GUTTER: (EJIW 7065) 2.2 CFS*
   –*MAY VARY DUE TO MANUFACTURER CHANGES
10. CONTACT THE TOWNSHIP ENGINEER 48 HOURS PRIOR TO CONSTRUCTION TO SCHEDULE INSPECTION. FULL TIME INSPECTION WILL BE REQUIRED FOR ALL UNDERGROUND STORM SEWER CONSTRUCTION. PHONE (248) 334–9901
11. THE CONTRACTOR SHALL CONTACT MISS DIG 72 HOURS BEFORE CONSTRUCTION AT (800) 482–7171 TO LOCATE EXISTING UNDERGROUND UTILITIES.
12. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL HAVE IN HIS POSSESSION A CURRENT SOIL EROSION CONTROL PERMIT AS ISSUED BY WHITE LAKE TOWNSHIP.
13. A 2' DEEP SUMP SHALL BE USED IN ANY STRUCTURE SUBJECT TO A WATER DROP GREATER THAN 2.0' FROM AN INLET PIPE.
14. ALLOWABLE STORM SEWER PIPE TYPES:
   –12" AND UP: RCP ASTM C–76 MIN. CLASS 3, MIN CLASS 4 UNDER TRAFFIC AREAS, RUBBER JOINT
   –6" TO 15": SCH 40 PVC OR SDR 23.5 PVC WITH RUBBER OR GLUE JOINT
   –6" TO 48": SMOOTH BORE CORRUGATED HIGH DENSITY POLYETHYLENE WITH NEOPRENE LINED JOINTS OR BETTER
15. THE MINIMUM PIPE SIZE IN PUBLIC RIGHT–OF–WAY OR EASEMENTS AND FOR PIPES CARRYING OFF–SITE STORM WATER SHALL BE 12"
16. ALL PIPE ENDS NOT WITHIN A STRUCTURE SHALL HAVE A CONCRETE OR METAL FLARE END SECTION (FES) WITH A BAR SCREEN ON PIPES 18" AND LARGER EXCEPT THOSE WITHIN A SECURE FENCED AREA NEED NO BAR SCREEN.
17. ALL DRAINAGE STRUCTURES WITHIN THE ROAD SHALL BE SEALED WITH WRAPPED GEOTEXTILE PER RCOC STANDARDS



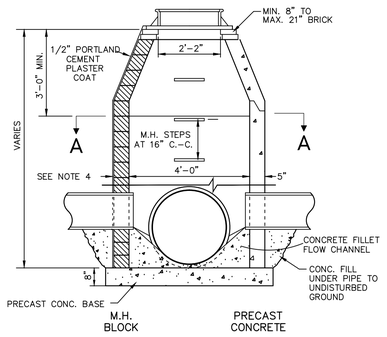
SECTION B–B
24" INLET



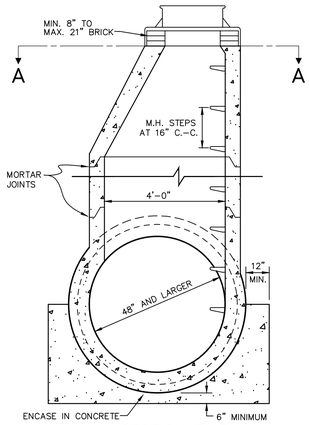
SECTION B–B
STRUCTURE WITH SLAB COVER
(CATCH BASIN SHOWN)



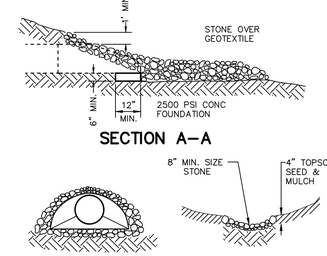
SECTION B–B
STANDARD CATCH BASIN



SECTION B–B
STANDARD STORM MANHOLE



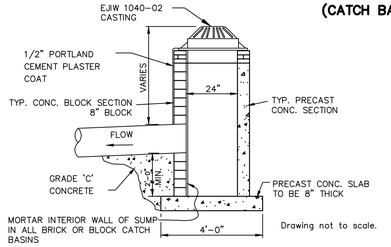
SECTION B–B
STANDARD PRECAST CONCRETE MANHOLE TEE



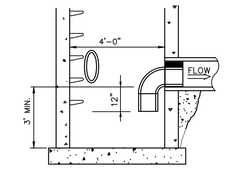
SECTION A–A

SECTION B–B SECTION C–C

PLAIN STONE RIP–RAP



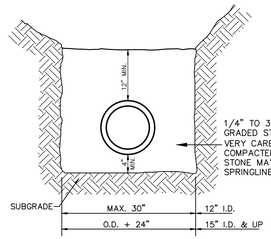
STANDARD REAR YARD CATCH BASIN



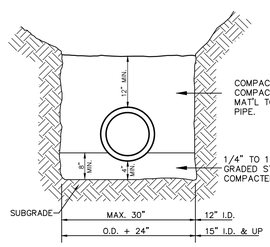
TRAP SHALL BE BULKHEADED IN OUTLET PIPE AND SHALL BE A SCH 40 PVC ASSY WITH A PIPE AREA NO LESS THAN 50% OF THE OUTLET PIPE.

ALTERNATE: USE "THE SNOUT" BASIN TRAP SYSTEM

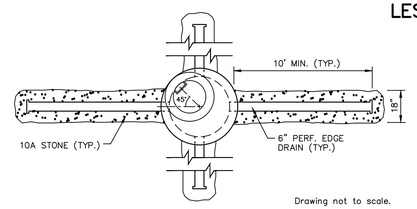
TRAPPED CATCH BASIN



PIPE BEDDING
FOR PLASTIC PIPE

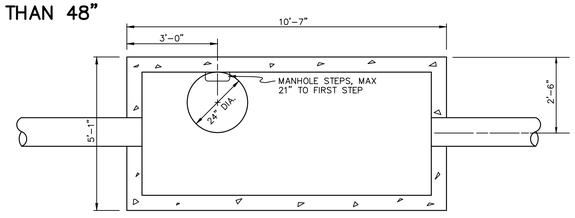


CLASS "B" BEDDING
FOR SEWER PIPE
LESS THAN 48"

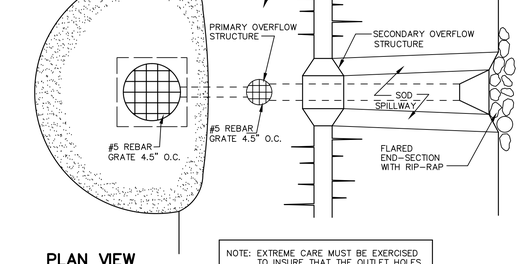


Drawing not to scale.

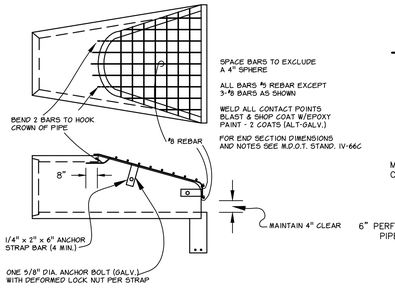
PLAN



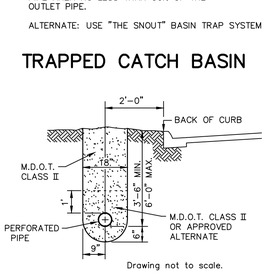
PLAN VIEW



NOTE: EXTREME CARE MUST BE EXERCISED TO INSURE THAT THE OUTLET HOLES IN THE STANDPIPE, DO NOT BECOME CLOGGED WITH SEDIMENT.

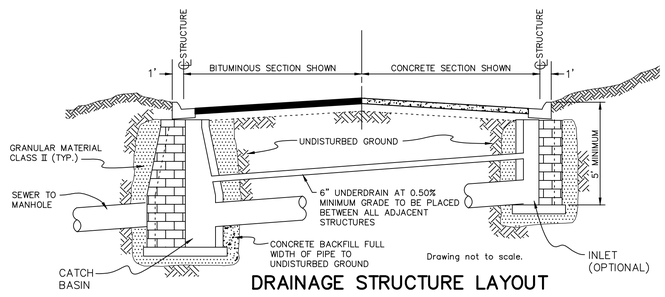


BAR SCREEN DETAIL



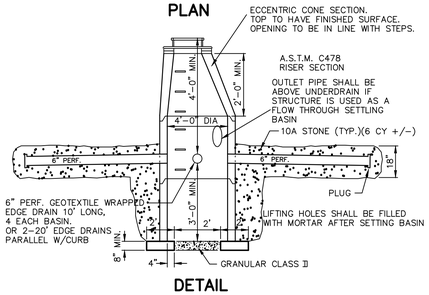
Drawing not to scale.

EDGE DRAIN DETAIL

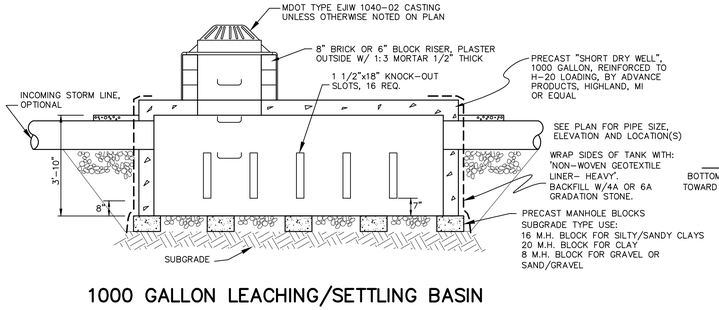


Drawing not to scale.

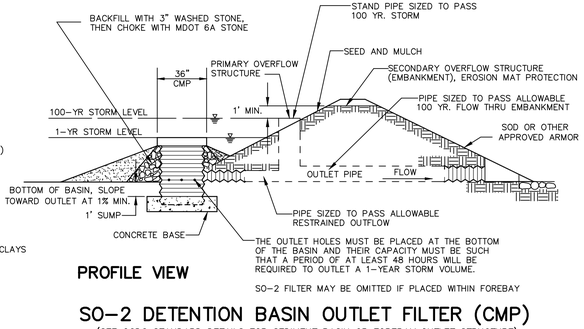
DRAINAGE STRUCTURE LAYOUT



DETAIL
STANDARD LEACHING BASIN



1000 GALLON LEACHING/SETTLING BASIN



PROFILE VIEW

SO–2 DETENTION BASIN OUTLET FILTER (CMP)

(SEE OCDC STANDARD DETAILS FOR SEDIMENT BASIN OR FOREBAY OUTLET STRUCTURE)

DRAWN: CAD
DESIGN: OA
CHECKED: –

SCALE: VERT. –
HORZ. AS NOTED

REVISIONS

MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE
	FIRST ISSUE	08/16/95		REVISE	10–03–02		REVISE	06–01–07
	ADD SO–1	06–17–96		REVISE	12–17–03		UPDATED TITLE BLOCK	04/30/13
	NEW BAR GRATE	11–03–97		SEC REFERENCE	05–17–05			

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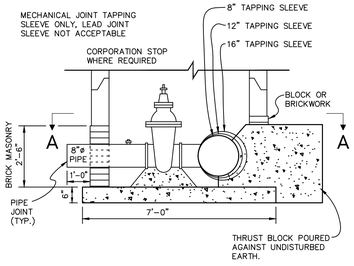
248-698-3300

STORM SEWER STANDARD DETAILS

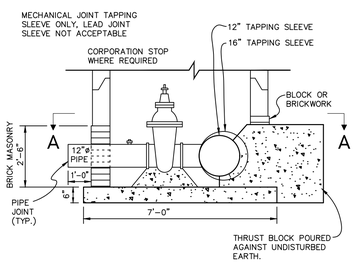
JOB NO.

DATE ISSUED 08/16/95

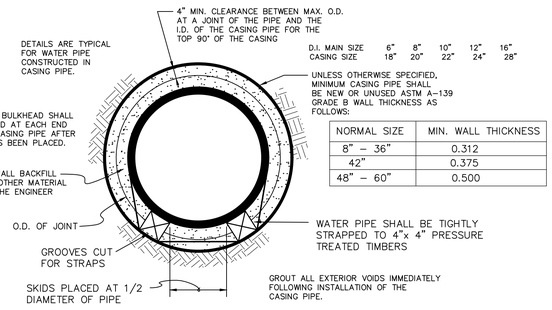
SHEET NO.



16" X 8", 12" X 8", 8" X 8"
TAPPING SLEEVE, VALVE & WELL
(B-B)



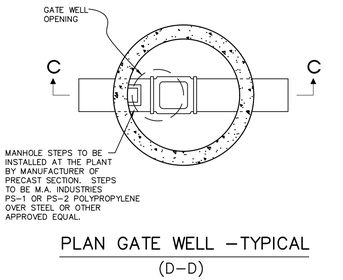
16" X 12", 12" X 12"
TAPPING SLEEVE, VALVE & WELL
(B-B)



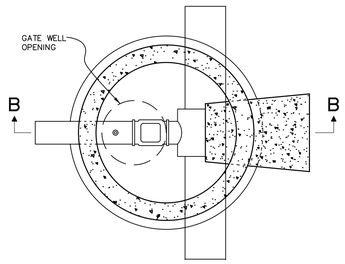
NORMAL SIZE	MIN. WALL THICKNESS
8" - 36"	0.312
42"	0.375
48" - 60"	0.500

Drawing not to scale.

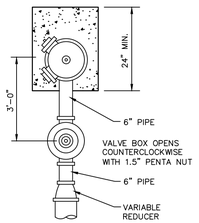
PIPE BARREL SUPPORT FOR WATER MAIN
CONSTRUCTED IN CASING

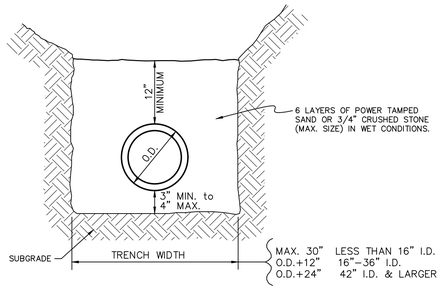


PLAN GATE WELL -TYPICAL
(D-D)

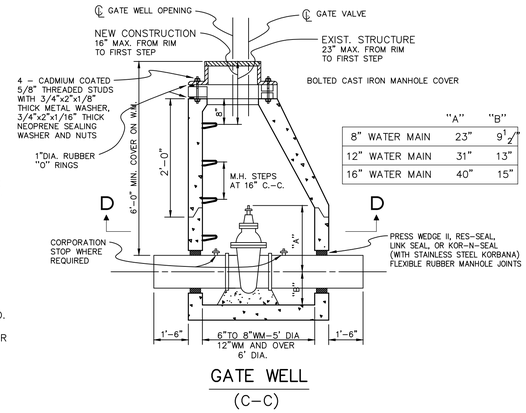


PLAN TAPPING SLEEVE, VALVE & WELL -TYPICAL
(A-A)





Drawing not to scale.
STANDARD BEDDING
FOR WATER PIPE



	"A"	"B"
8" WATER MAIN	23"	9 1/2"
12" WATER MAIN	31"	13"
16" WATER MAIN	40"	15"

GATE WELL
(C-C)

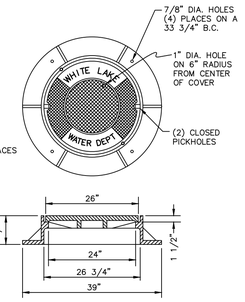
WATER MAIN NOTES

1. All construction procedures and materials used on this project shall conform to White Lake Township current standards and specifications.
2. All hydrants shall be East Jordan Iron Works 5BR-250 traffic model. Self-draining hydrants shall not be used. Valve shall have 1-1/2" pentagon nut and shall open counter-clockwise. Provide two 4.5" pumper outlets with 5" Storz quick connect nozzles (Harrington Integral Hydrant Storz, Model HIHS) as manufactured by Harrington, Inc. of Erie, PA.
3. All hydrants shall be field painted with a heavy coat of bright safety red polyurethane or alkyd gloss enamel, except for the Storz fittings and caps, which shall be left unpainted.
4. Johnson and Anderson, Inc. field personnel will affix to the fixed collar of each Storz connection 1" wide 3M Scotch reflective tape, color coded per NFPA 291 guidelines flow capacity.
5. All water mains shall be ductile iron pipe Class 54, cement lined with push on joints. Mechanical joints allowed only for tapping sleeves, hydrants & hydrant valves. Only Cor-Blue bolts shall be used for assembling mechanical joints. All bends, tees, valves and hydrant tees shall have a poured concrete thrust block as detailed on this sheet. Joints which have thrust blocks bearing on soil of questionable stability shall be fully restrained utilizing Tyler swivel ells and adapters or a system approved by the Township Engineer. HDPE pipe for directional boring, if approved by the Township Engineer, shall meet all of the requirements of the MDEQ and shall be DR9 (200 psi), and shall have two #8 tracer wires, terminated in the nearest gate well at the highest step.
6. Tapping sleeve shall be mechanical joint or approved equal. Ductile Iron or Stainless steel are allowed.
7. Specifications shall include direction of operation of all valves. All valves shall be counter clockwise open.
8. All necessary easements shall be provided in the name of White Lake Township before acceptance of the water distribution system.
9. The design engineer shall furnish White Lake Township with one reproducible sets of "As-Built" water main plans or an AutoCAD file upon completion of the job.
10. All required cross-connection devices shall be installed as required by the local plumbing inspector and in accordance with the standards of the Michigan Department of Public Health.
11. Gate well frame and cover shall be as follows: East Jordan heavy manhole cover, base flange type #1040 or Neenah Foundry heavy duty #R-1642 Manhole frame, solid lid cover shall be non-rocking and marked "White Lake Water Department"
12. Gate valves shall be AWWA approved and of a double disc or resilient wedge design with push on joints, 16" gate valves may be mechanical joint provided Cor-Blue bolts are used. All gate valves with operating nuts greater than 5' below ground surface shall be provided with an extension stem. The length of the extension shall be such that it will be within 5' of the ground surface when an extension is used it shall be held in place by an extension stem guide suitably fastened to the wall of the gate well.
13. 1" corporation stops are to placed on the main at each side of each main line gate valve and at such other locations as may be required by the engineer.
14. All pipe and fittings shall be subjected to a hydro-static pressure test of 150 PSI for a 2 hour duration; Township Engineer must be present. Maximum segment 2000 feet except that longer segments may be tested with allowable leakage based on 2000 feet.
15. 2 consecutive safe bacteria samples shall be taken from the water system approx. 24 hours apart at points established by the Township Engineer. Samples shall be taken by the Township Engineer.
16. Filling, flushing and sampling of water main can only be performed with a "Jumper" Line, the jumper shall be equipped with an approved RPZ type of backflow preventer.
17. Adjustments on gate wells shall be limited to 23" maximum from top of rim to first step in accordance with MIOSHA Rule 341.
18. All new water service lines shall have a minimum nominal size of 1". Services from 1" to 2" may be type K copper tubing or plastic DR-9 (200 PSI rated) meeting ASTM D2737-03 (Standard Specification for Polyethylene (PE) plastic tubing). ASTM Designation and pressure rating shall be stamped on the pipe by the manufacturer. Plastic pipe shall also meet AWWA C-901 Specifications. All sizes shall relate to the copper tubing outside diameter standard size (CTS). Copper pipe joints shall be flared. Fittings shall adapt to the plastic pipe with compression to iron pipe thread adapter. Plastic pipes shall be either compression style with a steel insert or may be fusion welded in the larger sizes.

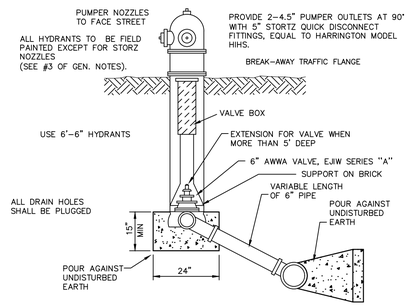
    Plastic water service pipes shall be traced with two #10 copper tracer wires or two #12 copper coated steel or stainless steel wires insulated with a minimum of 30 mils of polyethylene insulation. The tracer wires shall be terminated to supply line so as to be locatable at the building and the curb box without digging.

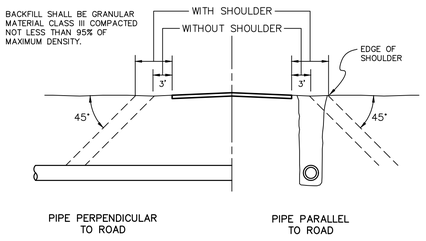
    Water services sizes 3" and greater shall be Class 54 cement lined ductile iron with push on joints or HDPE DR-9 (200 PSI rated) with fusion welded joints and fittings, DIPS (Ductile Iron Pipe Size).

    A stop box shall be installed at the property or easement line and shall be equivalent to an A.Y. McDonald Mfg. 6100 flare regular pattern ball valve. The curb box shall have a 1" riser pipe with an Erie 2-hole pattern cover equivalent to A.Y. McDonald Mfg. 5601L. Stop box shall be protected with a 2"x4" painted blue extending 4 feet above ground.
19. Standard pipe cover shall be 6'-0".
20. Air release manholes shall consist of a standard 5' diameter gate well style structure with a ValMatic Model 25C air release valve mounted on a 1" corporation stop. Air release shall be equipped with the vacuum check option. A 1/2" diameter galvanized pipe air discharge shall be extended to within 12" of the top of the structure. A gooseneck trap shall be installed at the top of the riser to prevent debris & water from entering the valve.

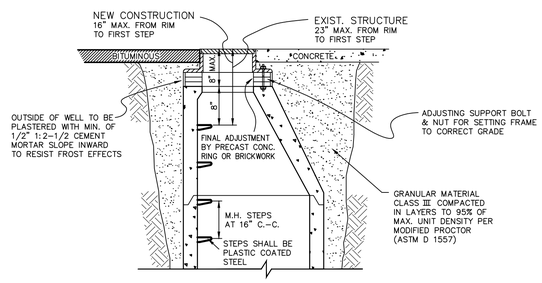


GATE WELL COVER & FRAME

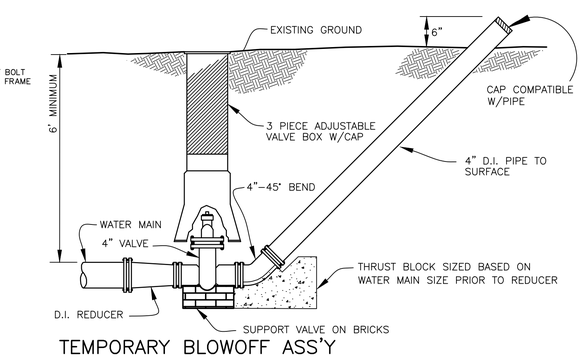




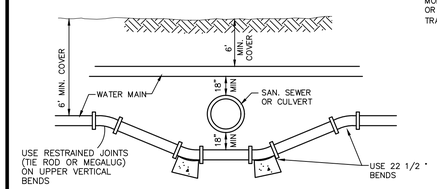
BACKFILL IN THE AREA OF STREETS,
ALLEYS, SIDEWALKS, DRIVES & PARKING AREAS



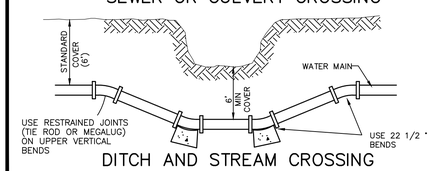
GATE WELL TOPS WITHIN PAVEMENT AREAS



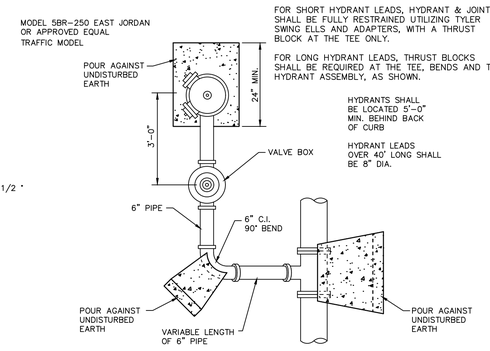
TEMPORARY BLOWOFF ASS'Y



SEWER OR CULVERT CROSSING

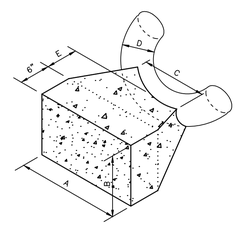


DITCH AND STREAM CROSSING



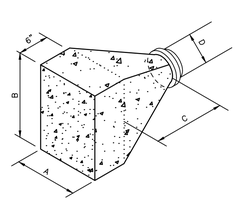
DETAIL OF HYDRANT SETTINGS

NOTE: 3000 PSI CONCRETE TO BE USED. THRUST BLOCK TO ABUT & REST AGAINST UNDISTURBED SOIL. RESTRAINED JOINTS WILL BE REQUIRED IF SOIL STABILITY IS QUESTIONABLE.



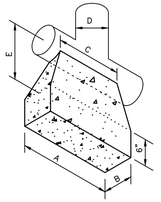
FOR 90° BENDS OR SMALLER

D	A	B	C	E MIN
20"	8"	6.5'	3.5'	2.5'
16"	6"	4'	2.5'	2'
12"	4"	3'	2'	1.75'
10"	3'	3'	2'	1.75'
8"	3'	2'	2'	1.5'
6"	2"	1.5'	2'	1.25'



FOR PLUGS

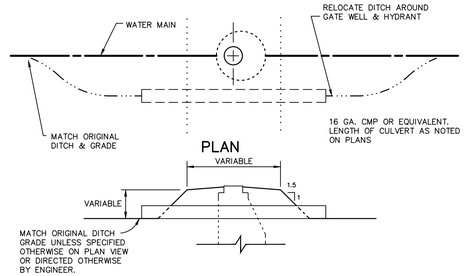
D	A	B	C MIN
20"	7'	5'	2.5'
16"	4.8'	4.8'	2'
12"	4.3'	3'	1.75'
10"	3'	2'	1.75'
8"	2.8'	2.5'	1.5'
6"	1.5'	1.5'	0.25'



FOR TEES

D	A	B	C	E MIN
20"	6.5'	4.5'	3.5'	3'
16"	4.7'	4.7'	2.5'	2.75'
12"	4'	3'	2.5'	2.5'
10"	3'	2'	2'	2.25'
8"	2.7'	2'	2'	2.25'
6"	2'	2'	2'	2.25'

THRUST BLOCK DETAILS



PROFILE
DITCH ENCLOSURE AT GATE WELL

DRAWN: CAD
DESIGN: OA
CHECKED: --

SCALE: VERT. --
HORZ. AS NOTED

REVISIONS

MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE
	GENERAL REVISION TO CAD	12/29/95		GW & NUT SIZE	07/23/98		CLARIFY HYD. SPEC	02/07/01		REV. HYD, THRUST, AIR REL.	03/29/04
	ADD NOTE 17	11/04/97		PIPE CIVER & FLANGE TAPE	05/12/99		5-BR HYD, WS STAKE	02/27/02		HDPE, HYD, VALVES	07/18/05
	REVISE HYD. & THRUSTING	05/18/98		ADD BLOWOFF	07/06/99		ADD NOTE 19	07/23/03		UPDATED TITLE BLOCK	04/30/13

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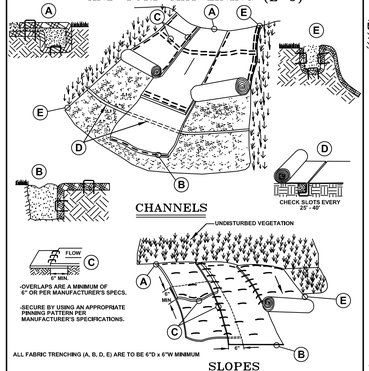
White Lake Township
7525 Highland Road (M-59)
White Lake, Michigan 48383
248-698-3300

WATER MAIN STANDARD DETAILS

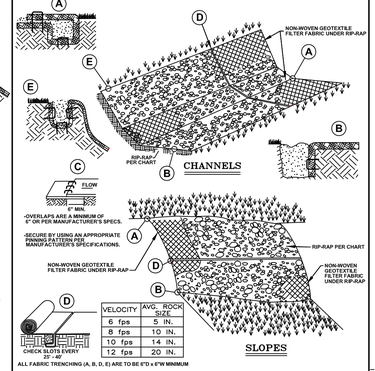
JOB NO.
DATE ISSUED
SHEET NO.

EROSION CONTROL BLANKETS AND TURF MAT LINING (E-9)



DEPENDING ON THE VELOCITY, SLOPE, SOILS, USE PROPER BLANKET OR TURF MAT LINING PER MANUFACTURER'S SPECIFICATIONS TO HANDLE THE SHEER STRESSES OF THE SLOPE/CHANNEL.

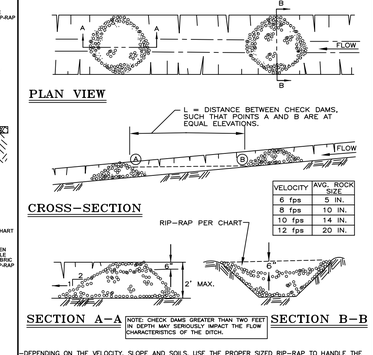
RIP-RAP: CHANNELS AND SLOPES (E-10)



VELOCITY	AVG. ROCK SIZE
5 fps	5 IN.
8 fps	10 IN.
10 fps	14 IN.
12 fps	20 IN.

DEPENDING ON THE VELOCITY, SLOPE AND SOILS, USE THE PROPER SIZED RIP-RAP AND NON-WOVEN GEOTEXTILE FABRIC TO HANDLE THE SHEER STRESS OF THE SLOPE/CHANNEL.

CHECK DAMS (E-3)



VELOCITY	AVG. ROCK SIZE
6 fps	5 IN.
8 fps	10 IN.
10 fps	14 IN.
12 fps	20 IN.

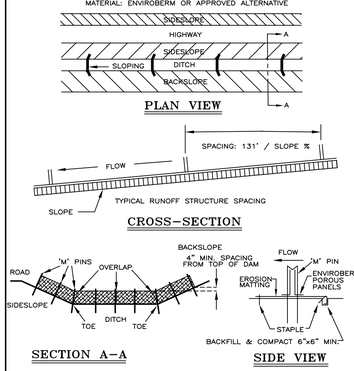
NOTE: CHECK DAMS GREATER THAN TWO FEET IN DEPTH MAY SERIOUSLY IMPACT THE FLOW CHARACTERISTICS OF THE DITCH.

-DEPENDING ON THE VELOCITY, SLOPE AND SOILS, USE THE PROPER SIZED RIP-RAP TO HANDLE THE SHEER STRESS OF THE SLOPE/CHANNEL.

-FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

CHECK DAMS ALTERNATIVE "A" (E-3A)

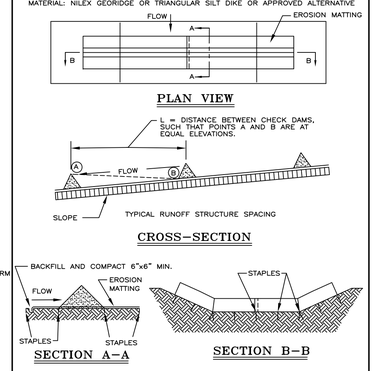
MATERIAL: ENVIROBERM OR APPROVED ALTERNATIVE



-FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

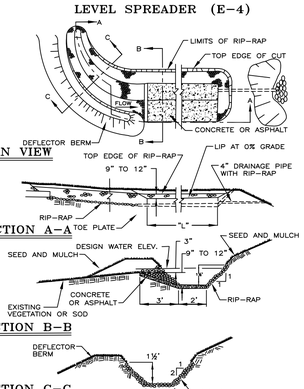
CHECK DAMS ALTERNATIVE "B" (E-3B)

MATERIAL: NILEX GEORIDGE OR TRIANGULAR SILT DIKE OR APPROVED ALTERNATIVE

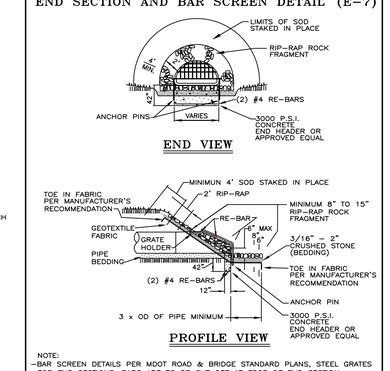


-FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

LEVEL SPREADER (E-4)



RIP-RAP, END SECTION AND BAR SCREEN DETAIL (E-7)

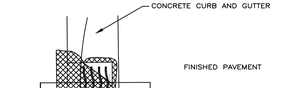


NOTE:
-BAR SCREEN DETAILS PER MDOT ROAD & BRIDGE STANDARD PLANS, STEEL GRATES FOR END SECTIONS. BARS ARE TO BE CUT OFF AT EDGE OF END SECTION.
-FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

VEGETATIVE BUFFER ZONE (SP-1)

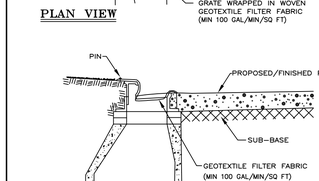
THE GRAPH SHOWN BELOW IS USED TO DETERMINE THE ADEQUACY OF AN EXISTING VEGETATIVE BUFFER ZONE FOR USE AS A SEDIMENT FILTER. THIS GRAPH IS ONLY APPLICABLE IF THE VEGETATION IS 90% DENSE AND AT LEAST 1" IN LENGTH OVER EVERY SQUARE FOOT OF DISTURBED SOIL. AN AREA COVERED WITH WEEDS, OR BUSHES AND TREES WITHOUT A GOOD GROUND COVER IS NOT ACCEPTABLE.

EXAMPLE



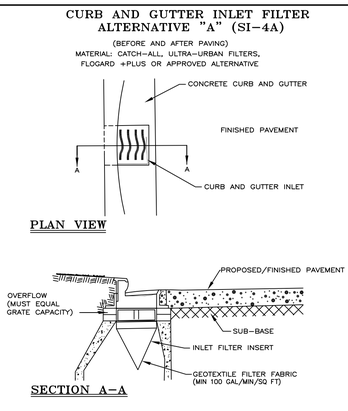
LENGTH OF BUFFER ZONE = ?
% OF SLOPE OF BUFFER ZONE = 5%
WHAT IS THE ACCEPTABLE LENGTH OF THE BUFFER ZONE?

PLOT IN GRAPH BELOW
BUFFER ZONE IS ACCEPTABLE AT 65'



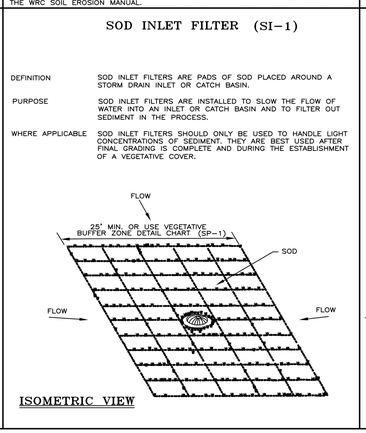
SILT FENCE (SP-2)

(MATERIAL: AMOCO PRO PEX 2130 OR APPROVED EQUIVALENT)



SILT FENCE ALTERNATIVE "A" (SP-2A)

(MATERIAL: SILT SHIELD OR APPROVED EQUIVALENT)



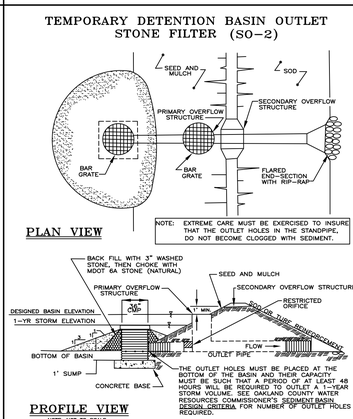
2% GRADE MAXIMUM SLOPE

Splicing Procedure:
Splicing EXTRUDED SEDIMENT FILTER FENCE is achieved beginning with an overlap of a min. of 8" of the EXTRUDED SEDIMENT FILTER FENCE ends being spliced. Place one plastic retainer post push-in fastener to locate those ends with one directly vertically, at least 1" from each edge of the splice.

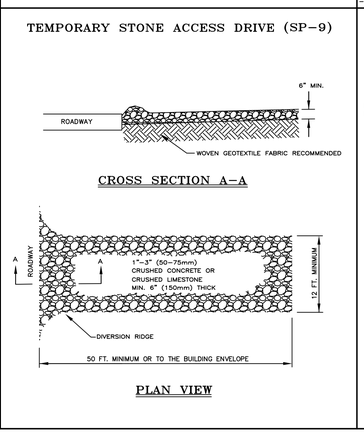
Optional Heat Splicing:
Overlap a minimum of eight inches. Melt a thin layer of EXTRUDED SEDIMENT FILTER FENCE with torch from top to bottom, immediately press both layers together for a minimum of 5 second. Check for total lamination from top to bottom of material. (Do not apply heat to filter)

WINTER/FROZEN GROUND SILT FENCE (SP-2W)

(MATERIAL: AMOCO PRO PEX 2130 OR APPROVED EQUIVALENT)

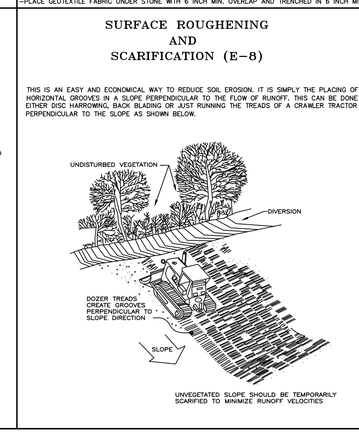


RYCB INLET FILTER (SI-3)



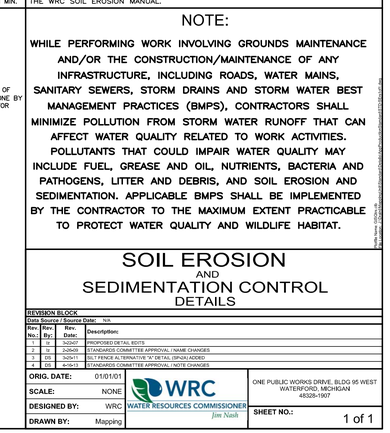
NOTE: MATERIAL IS NOT SILT FENCE MATERIAL

RYCB INLET FILTER ALTERNATIVE "A" (SI-3A)



RYCB INLET FILTER ALTERNATIVE "B" (SI-3B)

MATERIAL: SILT SAVER OR APPROVED ALTERNATIVE



(NOTE: NO PIT REQUIRED WHEN FRAME AND COVER OR GRATE AND COVER ARE IN PLACE.)

EARTH DIVERSION BERM WITH STONE OUTLET FILTER (SP-4)

EARTH DIVERSION BERM (E-2)

GRAVEL INTERCEPTOR DIKE (SP-6)

-PLACE GEOTEXTILE FABRIC UNDER STONE WITH 6 INCH MIN. OVERLAP AND TRENCHED IN 6 INCH MIN. -FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

LOW POINT INLET FILTER (SI-2)

ALTERNATIVE INLET FILTER MUST BE USED IN AREAS THAT MAY BECOME A SAFETY HAZARD DUE TO FLOODING OR FREEZING.

LOW POINT INLET FILTER ALT. "A" (SI-2A)

MATERIAL: CATCH-ALL, ULTRA-URBAN FILTERS, FLOGARD +PLUS OR APPROVED ALTERNATIVE

SILT FENCE GRAVEL FILTER (SP-3)

-PLACE GEOTEXTILE FABRIC UNDER STONE WITH 6 INCH MIN. OVERLAP AND TRENCHED IN 6 INCH MIN.

DITCH SEDIMENT TRAP (SO-4)

NOTE:
FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THE SHEET OR IN THE WRC SOIL EROSION MANUAL.

CURB AND GUTTER INLET FILTER (SI-4)

(BEFORE AND AFTER PAVING)

ALTERNATIVE INLET FILTER MUST BE USED IN AREAS THAT MAY BECOME A SAFETY HAZARD DUE TO FLOODING OR FREEZING.

CURB AND GUTTER INLET FILTER ALTERNATIVE "A" (SI-4A)

(BEFORE AND AFTER PAVING)

MATERIAL: CATCH-ALL, ULTRA-URBAN FILTERS, FLOGARD +PLUS OR APPROVED ALTERNATIVE

SOD INLET FILTER (SI-1)

DEFINITION	SOD INLET FILTERS ARE PADS OF SOD PLACED AROUND A STORM DRAIN INLET OR CATCH BASIN.
PURPOSE	SOD INLET FILTERS ARE INSTALLED TO SLOW THE FLOW OF WATER INTO AN INLET OR CATCH BASIN AND TO FILTER OUT SEDIMENT IN THE PROCESS.
WHERE APPLICABLE	SOD INLET FILTERS SHOULD ONLY BE USED TO HANDLE LIGHT CONCENTRATIONS OF SEDIMENT. THEY ARE BEST USED AFTER FINAL GRADING IS COMPLETE AND DURING THE ESTABLISHMENT OF A VEGETATIVE COVER.

TEMPORARY DETENTION BASIN OUTLET STONE FILTER (SO-2)

TEMPORARY STONE ACCESS DRIVE (SP-9)

SURFACE ROUGHENING AND SCARIFICATION (E-8)

THIS IS AN EASY AND ECONOMICAL WAY TO REDUCE SOIL EROSION. IT IS SIMPLY THE PLACING OF HORIZONTAL GROOVES IN A SLOPE PERPENDICULAR TO THE FLOW OF RUNOFF. THIS CAN BE DONE BY EITHER DISC HARROWING, BACK BLADING OR JUST RUNNING THE TREADS OF A CRAWLER TRACTOR PERPENDICULAR TO THE SLOPE AS SHOWN BELOW.

UNVEGETATED SLOPE SHOULD BE TEMPORARILY SCARIFIED TO MINIMIZE RUNOFF VELOCITIES

NOTE:

WHILE PERFORMING WORK INVOLVING GROUNDS MAINTENANCE AND/OR THE CONSTRUCTION/MAINTENANCE OF ANY INFRASTRUCTURE, INCLUDING ROADS, WATER MAINS, SANITARY SEWERS, STORM DRAINS AND STORM WATER BEST MANAGEMENT PRACTICES (BMPS), CONTRACTORS SHALL MINIMIZE POLLUTION FROM STORM WATER RUNOFF THAT CAN AFFECT WATER QUALITY RELATED TO WORK ACTIVITIES. POLLUTANTS THAT COULD IMPAIR WATER QUALITY MAY INCLUDE FUEL, GREASE AND OIL, NUTRIENTS, BACTERIA AND PATHOGENS, LITTER AND DEBRIS, AND SOIL EROSION AND SEDIMENTATION. APPLICABLE BMPS SHALL BE IMPLEMENTED BY THE CONTRACTOR TO THE MAXIMUM EXTENT PRACTICABLE TO PROTECT WATER QUALITY AND WILDLIFE HABITAT.

SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

REVISION BLOCK			
Date Source / Source Date:		N/A	
Rev. No.:	Rev. By:	Rev. Date:	Description:
1	W	3-23-07	PROPOSED DETAIL EDITS
2	W	3-29-07	STANDARDS COMMITTEE APPROVAL / NAME CHANGES
3	SS	3-29-11	SILT FENCE ALTERNATIVE "A" DETAIL (SP-2A) ADDED
4	DS	4-16-13	STANDARDS COMMITTEE APPROVAL / NOTE CHANGES

ORIG. DATE:	01/01/01
SCALE:	NONE
DESIGNED BY:	WRC
DRAWN BY:	Mapping

WRC WATER RESOURCES COMMISSIONER
Jim Nash

ONE PUBLIC WORKS DRIVE, BLDG 95 WEST
WATERFORD, MICHIGAN
48328-1907

SHEET NO.: 1 of 1

Great Lakes Taco, LLC
Construction Plans

6305 Highland Road, White Lake Twp., MI

APPLICANT

DORTCH ENTERPRISES, LLC
8467 RETREAT DR.
GRAND BLANC, MI 48439 PHONE:
(810)-771-4500

ARCHITECT

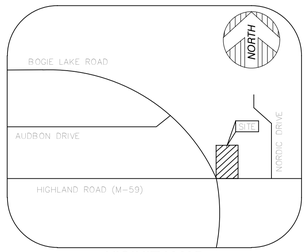
L + A ARCHITECTS INC.
441 S. LIVERNOIS ROAD, SUITE 265
ROCHESTER HILLS, MI 48307
PHONE: (248)-524-4700

CIVIL ENGINEER

KEM-TEC & ASSOCIATES
22556 GRATIOT AVENUE
EASTPOINTE, MI 48021
CONTACT: GREG EZZO
PHONE: (810)-712-8849

LEGEND

- LIGHTPOST/LAMP POST
- SANITARY MANHOLE
- FLAGPOLE
- SET X-CUT
- FOUND MONUMENT (AS NOTED)
- 0.00 GROUND ELEVATION
- ELECTRIC MANHOLE
- ELECTRIC METER
- TRANSFORMER
- UTILITY POLE
- GAS MANHOLE
- GAS METER
- GV GAS VALVE
- LIGHT POLE WITH STREET LAMP
- PUBLIC LIGHTING MANHOLE
- TELEPHONE MANHOLE
- TRAFFIC SIGNAL
- STORM DRAIN MANHOLE
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION
- WV WATER VALVE
- SINGLE POST SIGN
- DECIDUOUS TREE (AS NOTED)
- CONIFEROUS TREE (AS NOTED)
- CLEANOUT
- SQUARE CATCH BASIN
- SANITARY LINE
- STORM LINE
- W WATER LINE
- W GAS LINE
- PROPOSED CATCH BASIN
- PROPOSED MANHOLE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- SAN SAN SAN PROPOSED SANITARY LINE
- PROPOSED STORM WATER LINE
- PROPOSED WATER LINE
- SF SF SF PROPOSED SLIT FENCE



VICINITY MAP
(NOT TO SCALE)

DRAWING INDEX

C1.0	COVER SHEET
1	TOPOGRAPHIC SURVEY
C2.0	DEMOLITION PLAN
C3.0	SITE LAYOUT & PAVING PLAN
C3.1	FIRE TRUCK ACCESS PLAN
C4.0	GRADING PLAN
C5.0	UTILITY PLAN
C6.0	PROFILE PLAN
C7.0	SOIL EROSION & SEDIMENTATION CONTROL PLAN
C8.0	SITE DETAILS

WHITE LAKE TOWNSHIP SANITARY SEWER STANDARD DETAILS
WHITE LAKE TOWNSHIP STORM SEWER STANDARD DETAILS
WHITE LAKE TOWNSHIP WATER MAIN STANDARD DETAILS

OAKLAND COUNTY SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

PARCEL AREA

46,541± SQUARE FEET = 1.068± ACRES

FLOOD NOTE

SUBJECT PARCEL DOES NOT LIE WITHIN A FLOOD PLAIN

SITE BENCHMARKS

BENCHMARK #1
"IRRI" ARROW ON HYDRANT, FIRST HYDRANT ALONG WEST SIDE OF BOGIE LAKE ROAD NORTH OF HIGHLAND ROAD.
ELEVATION = 982.44' (NAVD 88)

BENCHMARK #2
"IRRI" ARROW ON HYDRANT, FIRST HYDRANT ALONG NORTH SIDE OF HIGHLAND ROAD EAST OF BOGIE LAKE ROAD.
ELEVATION = 985.56' (NAVD 88)

PROPERTY DESCRIPTION

LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:
A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH–SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 118.86 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 85 DEGREES 18 MINUTES 14 SECONDS EAST, 118.86 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00 DEGREES 01 MINUTE 09 SECONDS WEST, 236.61 FEET; THENCE 94.59 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 533.50 FEET, CHORD BEARING AND DISTANCE OF NORTH 05 DEGREES 00 MINUTES 27 SECONDS WEST, 94.46 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST, 147.67 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST, 338.00 FEET; THENCE 137.67 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF NORTH 84 DEGREES 36 MINUTES 27 SECONDS WEST, 137.67 FEET TO THE POINT OF BEGINNING.

Know what's below. Call before you dig.

STATE OF MICHIGAN
JOSEPH ROCCO DATTILO
ENGINEER
No. 6201049801
LICENSED PROFESSIONAL ENGINEER

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Grand Blanc (888) 894.0001
www.kemtecsgroupofcompanies.com

COVER SHEET

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGIE LAKE ROAD, WHITE LAKE TWP, MI, 48383

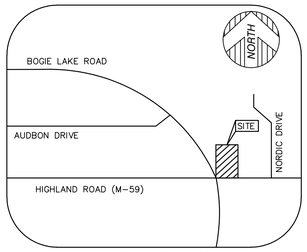
REVISION	DATE	BY
6	05.03.2022	GAE
5	02.28.2022	GAE
4	02.01.2022	GAE
3	11.01.2021	GAE
2	08.02.2021	GAE
1	05.29.2020	GAE

ENGINEERING REVIEW
ENGINEERING REVIEW
SITE PLAN APPROVAL
SPA RESUBMISSION
ENGINEERING SUBMISSION
SPA SUBMISSION
DESCRIPTION

drawn by: GAE 05/03/2022
design by:
date: MAY 03, 2022
project no. 18-00000
scale:

C1.0

C1.0 Cover Sheet.dwg
5/3/2022
dwg 2220



VICINITY MAP
(NOT TO SCALE)

LEGEND

- FOUND SECTION CORNER (AS NOTED)
- FOUND MONUMENT (AS NOTED)
- (R&M) RECORD AND MEASURED DIMENSION
- (R) RECORD DIMENSION
- (M) MEASURED DIMENSION
- 0.00 GROUND ELEVATION
- ELECTRIC METER
- UTILITY POLE
- GAS VALVE
- TRAFFIC SIGNAL
- TRAFFIC SIGNAL MANHOLE
- SANITARY MANHOLE
- ROUND CATCH BASIN
- SQUARE CATCH BASIN
- FIRE HYDRANT
- WATER GATE MANHOLE
- GENERATOR
- WATER VALVE
- WELL
- LIGHTPOST/LAMP POST
- SINGLE POST SIGN
- PARCEL BOUNDARY LINE
- PLATTED LOT LINE
- ADJOINER PARCEL LINE
- CONCRETE CURB
- EDGE OF CONCRETE (CONC.)
- EDGE OF ASPHALT (ASPH.)
- EDGE OF GRAVEL
- OVERHEAD UTILITY LINE
- G GAS LINE
- S SANITARY LINE
- D STORM LINE
- W WATER LINE
- E ELECTRIC LINE
- MINOR CONTOUR LINE
- MAJOR CONTOUR LINE
- BUILDING AREA
- ASPHALT
- CONCRETE

PARKING
NO MARKED PARKING ON SITE

PROPOSED PARCEL AREA
46,541± SQUARE FEET = 1.068± ACRES

BENCHMARKS
BENCHMARK #1
TURN ARROW ON HYDRANT, FIRST HYDRANT ALONG WEST SIDE OF BOGIE LAKE ROAD NORTH OF HIGHLAND ROAD.
ELEVATION = 982.44' (NAVD 88)

BENCHMARK #2
TURN ARROW ON HYDRANT, FIRST HYDRANT ALONG NORTH SIDE OF HIGHLAND ROAD EAST OF BOGIE LAKE ROAD.
ELEVATION = 985.56' (NAVD 88)

SURVEYOR'S NOTES
1. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES OTHER THAN THE STRUCTURE INVENTORY SHOWN HEREON.

2. ALL PROPERTY SPLITS REQUIRE PRIOR CITY, TOWNSHIP, COUNTY, AND/OR STATE APPROVAL.

PROPERTY DESCRIPTION
LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH-SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 118.86 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 85 DEGREES 18 MINUTES 14 SECONDS EAST, 118.86 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00 DEGREES 01 MINUTE 09 SECONDS WEST, 236.61 FEET; THENCE 94.59 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 533.50 FEET, CHORD BEARING AND DISTANCE OF NORTH 05 DEGREES 00 MINUTES 27 SECONDS WEST, 94.46 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST, 147.67 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST, 338.00 FEET; THENCE 137.67 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF NORTH 86 DEGREES 36 MINUTES 27 SECONDS WEST, 137.67 FEET TO THE POINT OF BEGINNING.

TITLE REPORT NOTE
ONLY THOSE EXCEPTIONS CONTAINED WITHIN THE FIDELITY NATIONAL TITLE INSURANCE COMPANY COMMITMENT No. GLT2100144, DATED FEBRUARY 8, 2021, AND RELISTED BELOW WERE CONSIDERED FOR THIS SURVEY. NO OTHER RECORDS RESEARCH WAS PERFORMED BY THE CERTIFYING SURVEYOR.

10. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT: GRANTED TO: GENERAL TELEPHONE COMPANY OF MICHIGAN, A MICHIGAN CORPORATION RECORDING NO: LIBER 6239, PAGE 266. (DOES NOT CROSS SUBJECT PROPERTY)

11. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT: GRANTED TO: GENERAL TELEPHONE COMPANY OF MICHIGAN, A MICHIGAN CORPORATION RECORDING NO: LIBER 6239, PAGE 267. (DOCUMENT NOT LEGIBLE, EASEMENT SHOWN PER PREVIOUS SURVEY)

12. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT: GRANTED TO: GENERAL TELEPHONE COMPANY OF MICHIGAN, A MICHIGAN CORPORATION RECORDING NO: LIBER 6239, PAGE 279. (DOCUMENT NOT LEGIBLE, EASEMENT SHOWN PER PREVIOUS SURVEY)

13. TERMS, COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS WHICH ARE RECITED IN NON-EXCLUSIVE STORM SEWER EASEMENT RECORDED IN LIBER 20698, PAGE 749. (DOES NOT CROSS SUBJECT PROPERTY)

14. TERMS, COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS WHICH ARE RECITED IN ROAD AND GRADING EASEMENT RECORDED IN LIBER 27727, PAGE 92. (DOES NOT CROSS SUBJECT PROPERTY)

15. TERMS, COVENANTS AND CONDITIONS WHICH ARE RECITED IN MEMORANDUM OF DEVELOPMENT AGREEMENT RECORDED IN LIBER 30116, PAGE 166. MEMORANDUM OF AMENDED DEVELOPMENT AGREEMENT RECORDED IN LIBER 48677, PAGE 714. (SEE DOCUMENT FOR TERMS AND CONDITIONS)

16. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT: GRANTED TO: BOARD OF COUNTY ROAD COMMISSIONERS OF THE COUNTY OF OAKLAND, A PUBLIC BODY CORPORATE RECORDING NO: LIBER 35774, PAGE 385. (AS SHOWN)

17. TERMS, COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS WHICH ARE RECITED IN NON-EXCLUSIVE WATER MAIN EASEMENT RECORDED IN LIBER 40404, PAGE 496. (AS SHOWN)

18. TERMS, COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS WHICH ARE RECITED IN NON-EXCLUSIVE SANITARY SEWER EASEMENT RECORDED IN LIBER 40542, PAGE 639. (AS SHOWN)

19. TERMS, COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS WHICH ARE RECITED IN NON-EXCLUSIVE ACCESS EASEMENT RECORDED IN LIBER 41482, PAGE 635. (AS SHOWN)

MANHOLE SCHEDULE

NUM	TYPE	RIM (FT)	SIZE (IN)	DIR	INV ELEV (FT)
20071	STORM CB	979.06	12	NE	973.64
		979.06	12	W	973.64
20072	STORM CB	979.21	12	E	974.01
		979.21	36	W	974.01
20073	STORM CB	979.94	12	SW	974.94
20074	SANITARY MH	980.25	8	N	970.75
		980.25	8	SE	970.51
20075	SANITARY MH	986.31	8	N	973.36
		986.31	8	S	972.91
		986.31	8	N	977.11
20076	STORM CB	985.11	36	W	975.51

SURVEYOR'S CERTIFICATION
TO GREAT LAKES TACO, LLC; MEIJER, INC.; AND FIDELITY NATIONAL TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDED ITEMS 1, 2, 4, 5, 7A, 8, 9, AND 11 OF TABLE A, THEREOF. THE FIELD WORK WAS COMPLETED ON 01/05/2021.

DATE OF PLAT OR MAP: 01/21/2021

ANTHONY T. SYCKO, JR., P.S.
PROFESSIONAL SURVEYOR
MICHIGAN LICENSE NO. 47976
22556 GRATIOT AVE., EASTPOINTE, MI 48021
TSycko@kemtec-survey.com

STATE OF MICHIGAN ANTHONY T. SYCKO, JR PROFESSIONAL SURVEYOR No. 47976 LICENSED PROFESSIONAL SURVEYOR

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A GROUP OF COMPANIES
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Grand Blanc (888) 694-0001
Eastpointe (800) 295-7222
Detroit (313) 758-0877
www.kemteagroupofcompanies.com

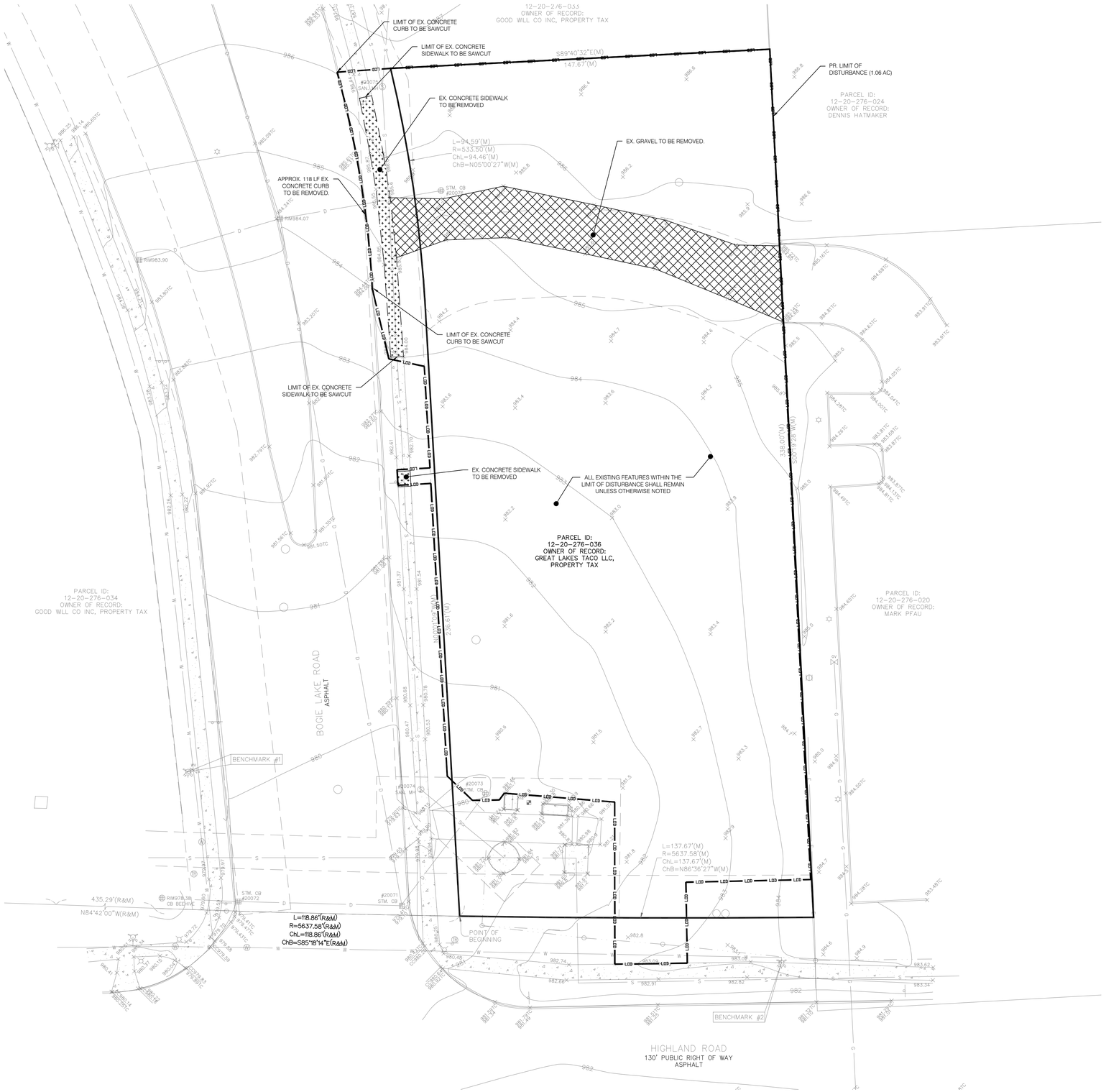
ALTA / NSPS LAND TITLE SURVEY
PREPARED FOR: DORTCH ENTERPRISES
6305 HIGHLAND, WHITE LAKE, MICHIGAN,
PART OF SECTION 20,
TOWN 3 NORTH, RANGE 8 EAST

REVISION	DATE	DESCRIPTION	BY
5	03-01-22	REVISED PARCEL ID OF SUBJECT PROPERTY	JDM
4	11-01-21	PER REVIEW COMMENTS	MRJ
3	10-18-21	ADD SIDEWALK WIDTHS	ATS
2	09-22-21	REVISED PER REVIEW COMMENTS	MRJ
1	03-12-21	ADD TITLE WORK	CMC

DRAWN BY: CMC 01/21/2021
CHECKED BY: ATS 01/21/2021
DATE: JANUARY 21, 2021
SCALE: 1" = 20'
PROJECT NO. 20-03619

1

1 OF 1 SHEETS



GENERAL DEMOLITION NOTES

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT:

1. ALL MATERIAL TO BE REMOVED, WHETHER SPECIFICALLY NOTED IN THE PLANS OR NOT, SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF OFF-SITE IN A LEGAL MANNER. NO ON-SITE BURY OR BURN PITS SHALL BE ALLOWED.
2. ALL DEMOLITION WORK SHALL CONFORM TO ALL LOCAL CODES AND ORDINANCES.
3. STAGING/PHASING OF DEMOLITION AND CONSTRUCTION IS TO BE COORDINATED WITH THE OWNER AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
4. SPECIFIC DEMOLITION ITEMS HAVE BEEN INDICATED ON THE PLANS AS A GUIDE TO THE GENERAL SCOPE OF THE WORK. IT IS THE INTENT THAT THESE ITEMS SHALL BE COMPLETELY REMOVED BY THE CONTRACTOR ABOVE AND BELOW GROUND, UNLESS SPECIFICALLY NOTED OTHERWISE, AND THAT DEMOLITION WILL INCLUDE BUT WILL NOT NECESSARILY BE LIMITED TO THESE ITEMS. CONTRACTOR SHALL VISIT SITE TO VERIFY EXISTING CONDITIONS AND EXTENTS OF THE DEMOLITION THAT WILL BE REQUIRED PRIOR TO SUBMITTING A BID.
5. REMOVE ALL STRUCTURES DESIGNATED FOR REMOVAL ACCORDING TO THE DEMOLITION PLAN. THIS INCLUDES CONCRETE SIDEWALKS, BRICK AND CURBED AREAS, ASPHALT, TRESS, ETC.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN UP, NOISE, DUST CONTROL, STREET SWEEPING AND HOURS OF OPERATION IN ACCORDANCE WITH THE LOCAL CODES.
7. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADES, SIGNAGE, MARKINGS, LIGHTS AND OTHER TRAFFIC CONTROL DEVICES TO PROTECT THE WORK ZONE AND SAFELY MAINTAIN TRAFFIC PER AGENCY REQUIREMENTS AND IN ACCORDANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) LATEST EDITION.
8. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES TO CONFIRM THAT UTILITY LEADS HAVE BEEN TAKEN OUT OF SERVICE PRIOR TO DEMOLITION.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF SIGNS AND SUPPORTS WITHIN THE WORK AREA, AS NECESSARY TO FACILITATE CONSTRUCTION. SIGNS SHALL BE PROTECTED OR STOCKPILED FOR REUSE AS SPECIFIED IN THE PLANS OR AS REQUIRED BY THE AGENCY OF JURISDICTION. THE CONTRACTOR SHALL REPLACE ANY DAMAGED SIGNS AND SUPPORTS AT NO ADDITIONAL COST TO THE OWNER.
10. THE CONTRACTOR SHALL NOTIFY MISS DIG, THE WHITE LAKE TOWNSHIP ENGINEER AND /OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
11. ALL SITE FEATURES WITHIN THE LIMIT OF DISTURBANCE INDICATED ON THIS PLAN ARE TO BE REMOVED/DEMOLISHED UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL NOTIFY KEM-TEC IF SIGNIFICANT DISCREPANCIES ARE DISCERNED BETWEEN THIS PLAN & FIELD CONDITIONS.
12. THE LOCATION OF ALL UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE BASED ON RECORDS PROVIDED BY THE UTILITY OWNERS AND VISIBLE EVIDENCE OBTAINED IN THE FIELD. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED TO THE COMPLETENESS OR ACCURACY THEREOF.

DEMOLITION LEGEND

- CONCRETE PAVEMENT REMOVAL
- PROPERTY LINE
- LOD — LIMITS OF DISTURBANCE

Know what's below. Call before you dig.

NORTH

DEMOLITION PLAN
SCALE: 1"= 20'

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Detroit (313) 758.0677
www.kemtecgroupofccompanies.com

DEMOLITION PLAN

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGIE LAKE ROAD, WHITE LAKE TWP, MI, 48383

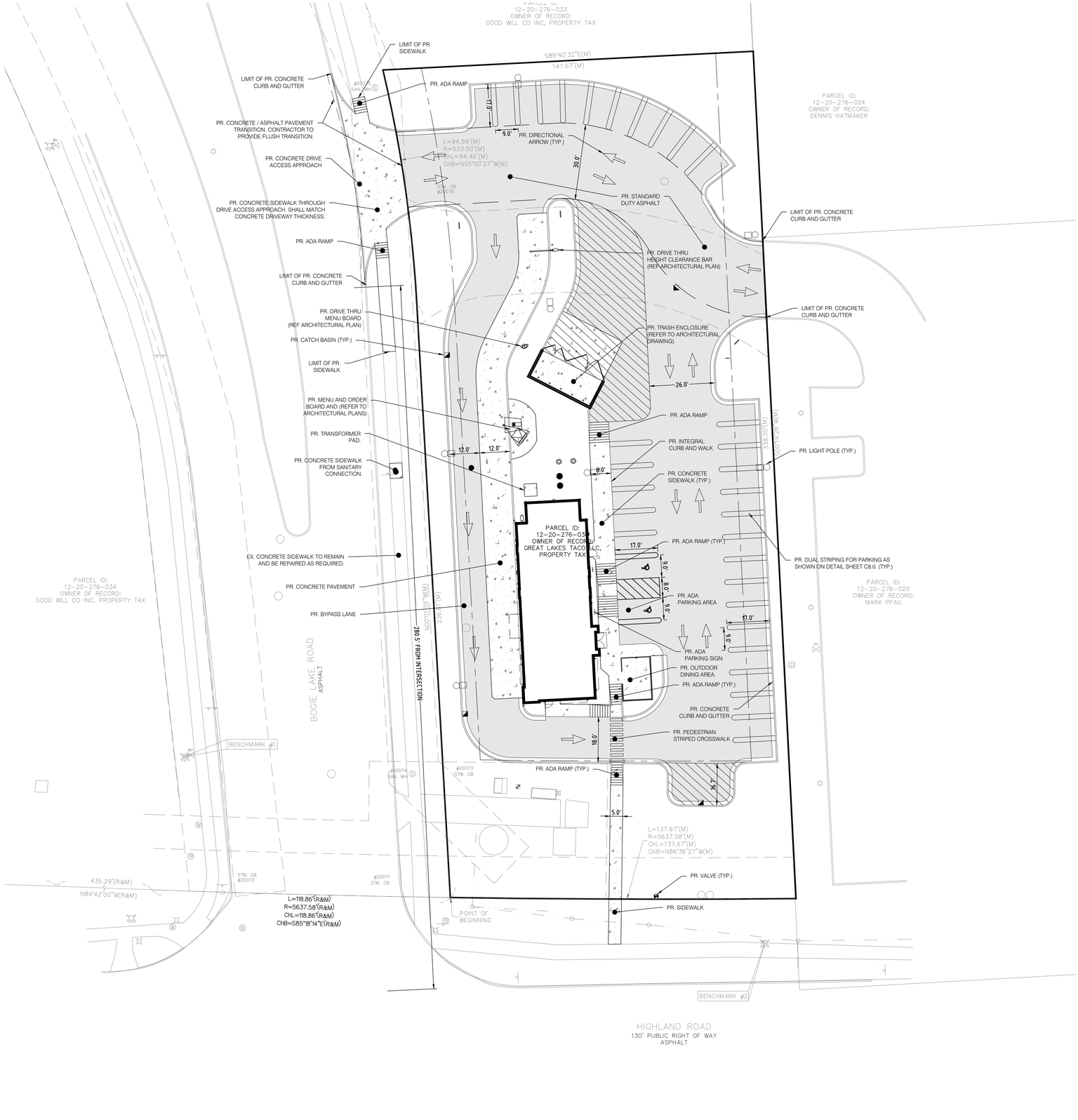
REVISION	DATE	BY	DESCRIPTION
6	05.03.2022	GAE	ENGINEERING REVIEW
6	03.24.2022	GAE	ENGINEERING REVIEW
5	02.28.2022	GAE	ENGINEERING REVIEW
4	02.01.2022	GAE	SITE PLAN APPROVAL
3	11.01.2021	GAE	SPA RESUBMISSION
2	08.02.2021	GAE	ENGINEERING SUBMISSION

DRAWN BY: GAE 05/03/2022
CHECKED BY:
DATE: MAY 03, 2022
SCALE: 1" = 20'
PROJECT NO: -00000

C2.0

STATE OF MICHIGAN
JOSEPH ROCCO DATTILO
ENGINEER
No. 6201049601
PROFESSIONAL ENGINEER

C2.0 Demolition Plan.dwg
July 2022
Plot: C2.0



SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED BUILDING
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED WATER STRUCTURES
- PROPOSED MANHOLE / CATCH BASIN

SITE NOTES

1. ALL LIGHTING SHALL BE SHIELDED AND DIRECTED DOWNWARD AND AWAY FROM ADJACENT PROPERTIES. LIGHTING SHALL MEET REQUIREMENTS OF THE LOCAL ZONING ORDINANCE. SEE LIGHTING PLAN FOR ADDITIONAL INFORMATION.
2. GROUND MOUNTED TRANSFORMERS AND ROOF MOUNTED MECHANICAL EQUIPMENT SHALL BE SCREENED AS REQUIRED IN THE LOCAL ZONING ORDINANCE.
3. ALL SIGNS TO MEET REQUIREMENTS OF CITY CODE OF ORDINANCES AND BE APPROVED BY BUILDING DEPARTMENT
4. PARKING SPACES SHALL BE STRIPPED PER LOCAL ZONING ORDINANCE
5. RESTORATION OF ANY EXISTING HARD SURFACE AREA, OF ANY TYPE, REQUIRED AS A RESULT OF REMOVAL OF EXISTING SURFACING BY WHITE LAKE TOWNSHIP FORCES OR AGENTS DURING THE COURSE OF MAINTENANCE OF WATER MAIN OR SANITARY SEWER LOCATED UNDER PAVEMENT, IS THE RESPONSIBILITY OF THE OWNER OF THIS SITE AND WILL NOT BE PERFORMED BY, NOR PAID FOR BY WHITE LAKE TOWNSHIP
6. THE SITE IS NOT ADJACENT TO ANY RESIDENTIALLY ZONED PROPERTY.
7. THE DEVELOPER SHALL BE REQUIRED TO REPAIR/REPLACE ANY BROKEN SECTIONS OF CONCRETE WITHIN THE FRONTAGE SIDEWALKS ADJACENT TO ADJACENT TO THE SITE ALONG BOGIE LAKE ROAD AND HIGHLAND ROAD, AS DETERMINED BY THE TOWNSHIP ENGINEERING CONSULTANT

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www.kemtecagroupofcompanies.com

SITE LAYOUT AND PAVING PLAN

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGIE LAKE ROAD, WHITE LAKE TWP, MI, 48383

REVISION	DATE	BY	DESCRIPTION
6	06.03.2022	GAE	ENGINEERING REVIEW
7	04.27.2022	DM	SPA APPROVAL
6	04.26.2022	GAE	SPA APPROVAL
6	03.24.2022	GAE	ENGINEERING REVIEW
5	02.28.2022	GAE	ENGINEERING REVIEW
4	02.01.2022	GAE	SITE PLAN APPROVAL

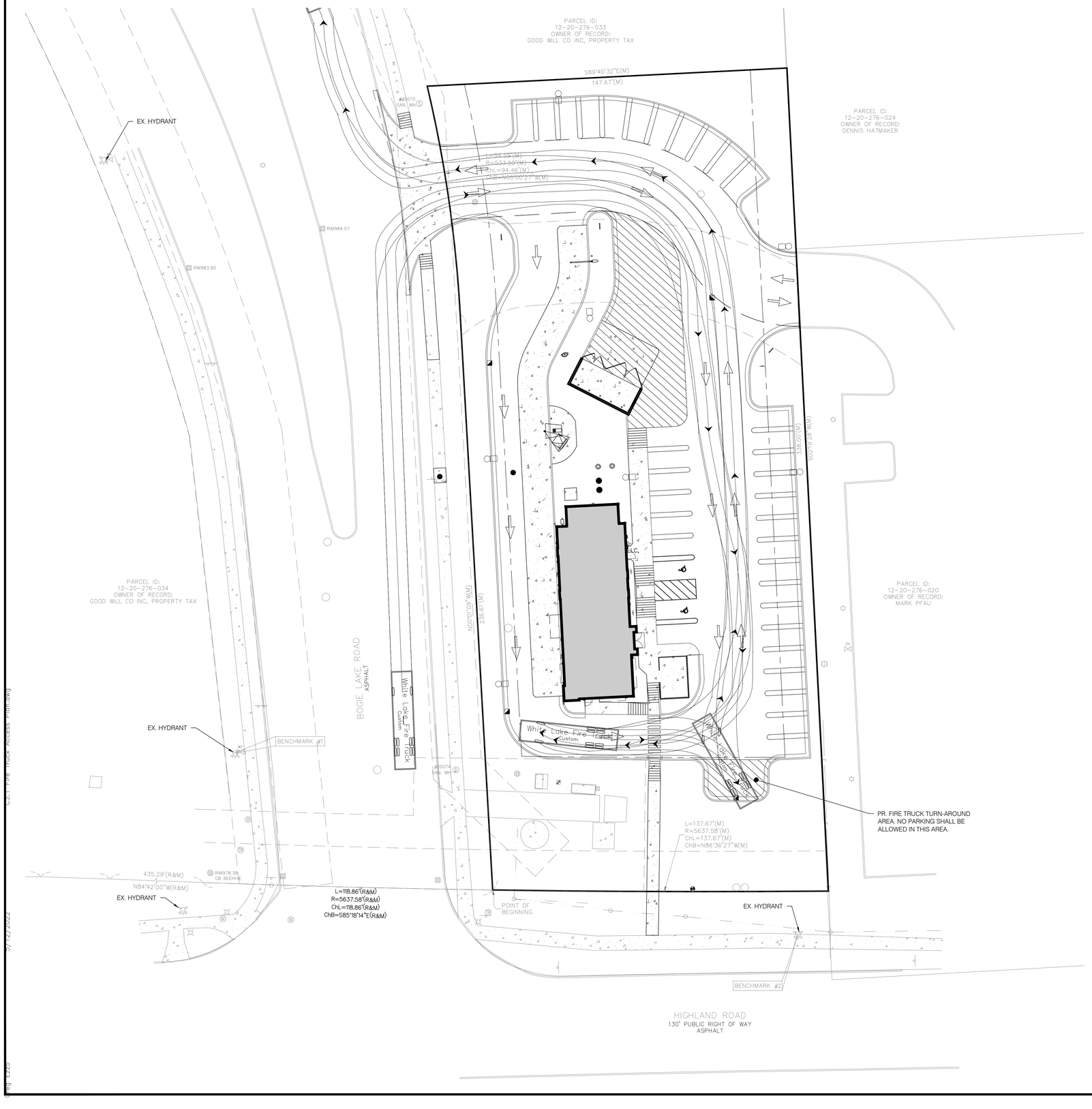
DRAWN BY: GAE 05/03/2022
CHECKED BY:
DATE: MAY 03, 2022
PROJECT NO: 00-00000
SCALE: 1" = 20'

C3.0

SITE LAYOUT AND PAVING PLAN

SCALE: 1"= 20'

C:\Users\Daniel Kagan\Desktop\Great Lakes Taco\C3.0 Site Layout & Paving Plan.dwg 5/18/2022



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Grand Blanc (888) 694.0001
www.kemtecsgroupofcompanies.com

FIRE TRUCK ACCESS PLAN

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGIE LAKE ROAD, WHITE LAKE TWP, MI, 48383

REVISION	DATE	BY	DESCRIPTION
6	05.03.2022	GAE	ENGINEERING REVIEW
6	03.24.2022	GAE	ENGINEERING REVIEW
5	02.28.2022	GAE	ENGINEERING REVIEW
4	02.01.2022	GAE	SITE PLAN APPROVAL
3	11.01.2021	GAE	SPA RESUBMISSION
1	6.14.2021	GAE	SPA SUBMISSION

STATE OF MICHIGAN
JOSEPH ROCCO DATTILO
ENGINEER
No. 6201049801
LICENSED PROFESSIONAL ENGINEER

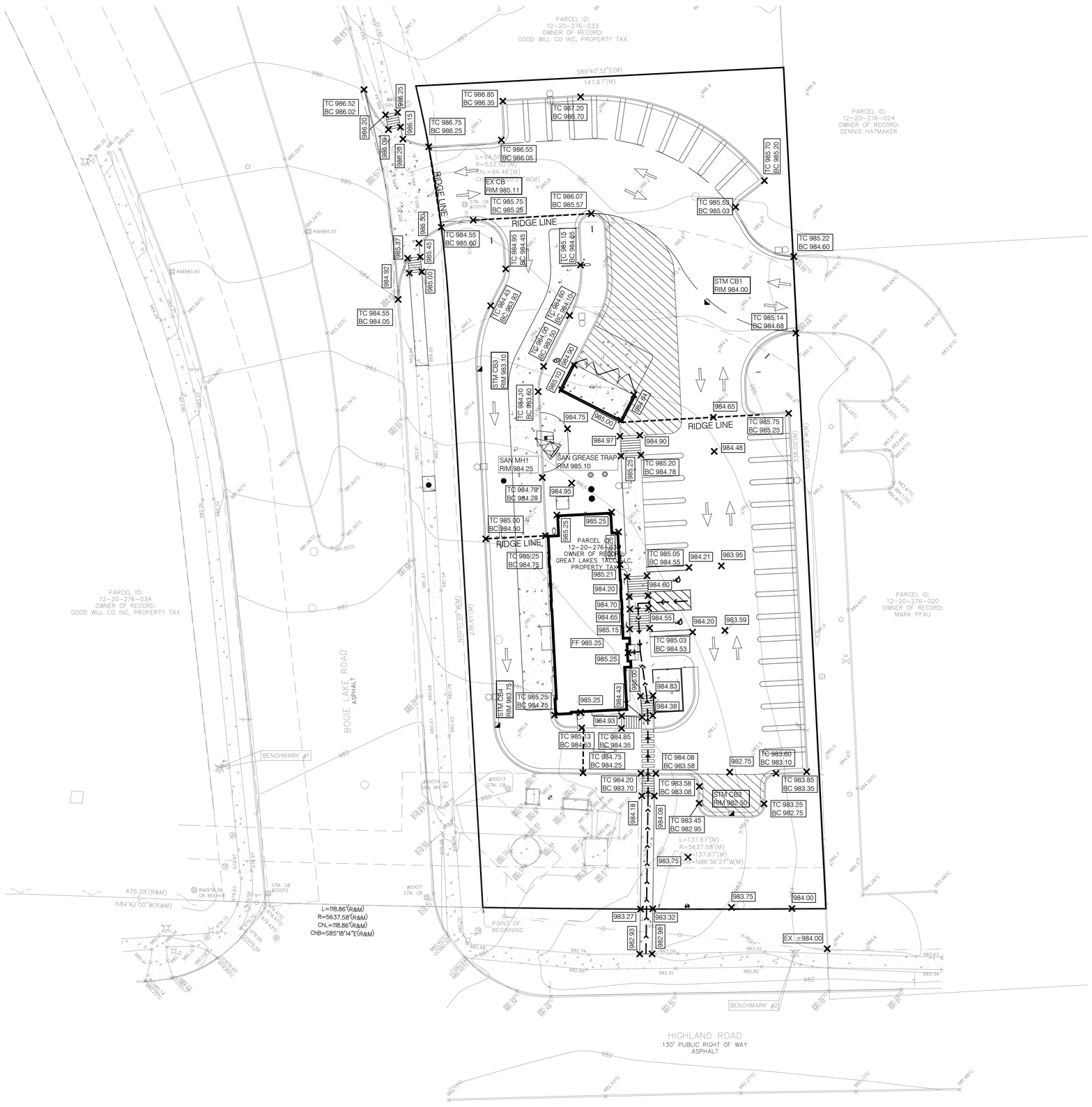
DRAWN BY: GAE
CHECKED BY:
DATE: MAY 03, 2022
PROJECT NO. 18-00000
SCALE: 1" = 20'

NORTH

FIRE TRUCK ACCESS PLAN
SCALE: 1"= 20'

C3.1

C3.1 Fire Truck Access Plan.dwg
5/12/2022
Greg Cazar


PARCEL ID:
12-20-276-033
OWNER OF RECORD:
GOOD WILL CO INC, PROPERTY TAX
S89°40'32"E(M)
147.67'(M)
PARCEL ID:
12-20-276-024
OWNER OF RECORD:
DENNIS HATMAKER
PARCEL ID:
12-20-276-034
OWNER OF RECORD:
GOOD WILL CO INC, PROPERTY TAX
PARCEL ID:
12-20-276-020
OWNER OF RECORD:
MARK PFAU
PARCEL ID:
12-20-276-026
OWNER OF RECORD:
GREAT LAKES TACO, LLC,
PROPERTY TAX
RIDGE LINE
EX CB
RIM 985.11
STM. CB
#20076
STM CB1
RIM 984.00
STM CB3
RIM 983.10
STM CB4
RIM 983.75
STM CB2
RIM 982.50
SAN MH1
RIM984.25
SAN GREASE TRAP
RIM 985.10
L=94.56'(M)
R=533.50'(M)
ChL=94.46'(M)
ChB=S84°55'47"W(M)
N00°01'09"W(M)
236.61'(M)
S00°01'09"E(M)
335.01'(M)
435.29'(R&M)
N84°42'00"W(R&M)
L=118.86'(R&M)
R=5637.58'(R&M)
ChL=118.86'(R&M)
ChB=S85°18'14"E(R&M)
L=137.67'(M)
R=5637.58'(M)
137.67'(M)
ChB=N86°36'27"W(M)
POINT OF BEGINNING
BENCHMARK #1
BENCHMARK #2
BOGIE LAKE ROAD
ASPHALT
HIGHLAND ROAD
130' PUBLIC RIGHT OF WAY
ASPHALT
RIM984.07
RIM983.90
RIM978.38
CB BEEHIVE
#20074
STM. MH
#20073
STM. CB
#20071
STM. CB
TC 986.52
BC 986.02
TC 986.85
BC 986.35
TC 987.20
BC 986.70
TC 986.75
BC 986.25
TC 986.55
BC 986.05
TC 985.70
BC 985.20
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TC 985.22
BC 984.60
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TC 984.55
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TC 984.60
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BC 983.58
TC 984.20
BC 983.70
TC 983.58
BC 983.08
TC 983.45
BC 982.95
TC 983.60
BC 983.10
TC 983.85
BC 983.35
TC 983.25
BC 982.75
FF 985.25
EX. ±984.00
984.65
984.75
985.00
984.97
984.90
984.48
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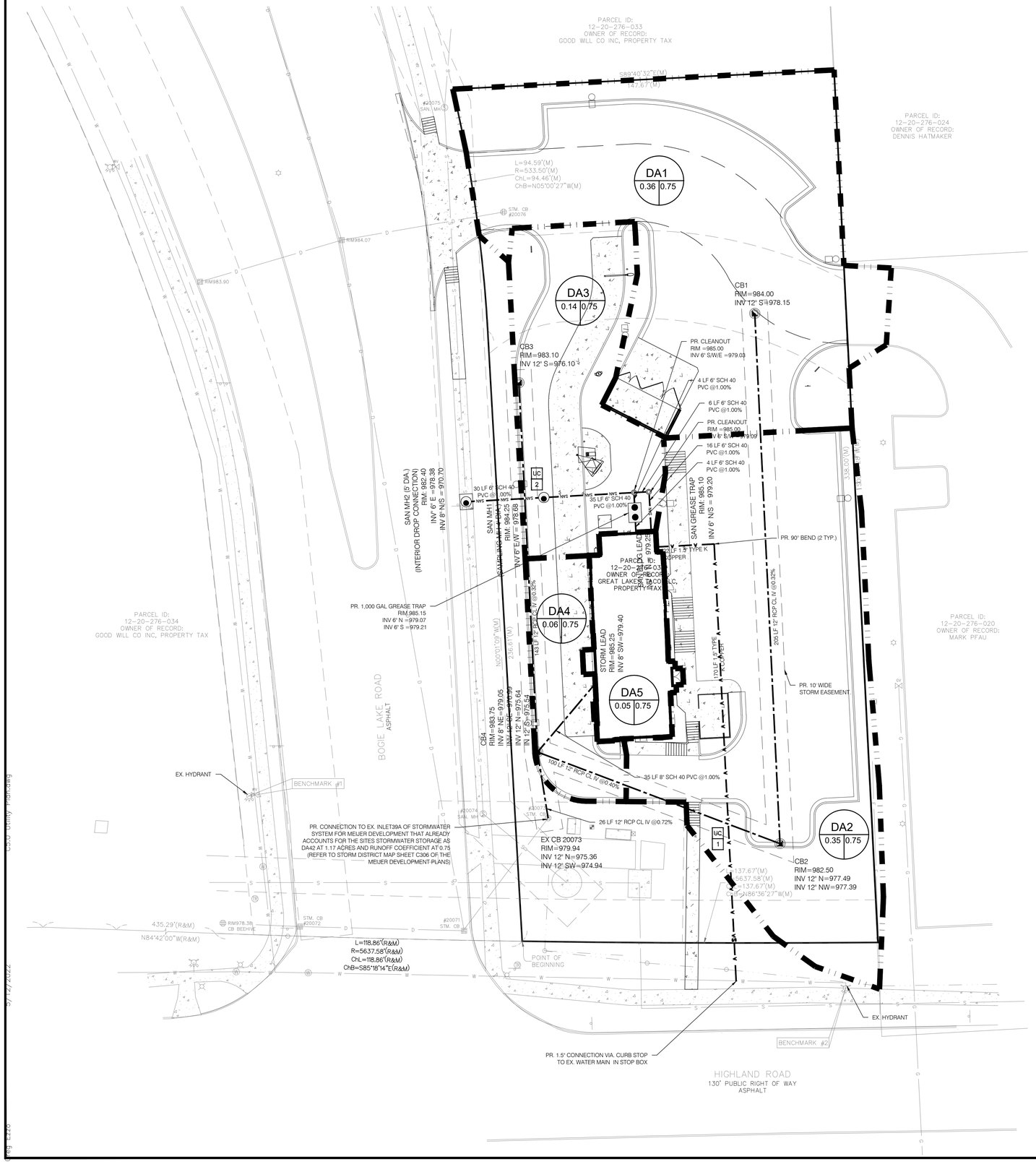
985.25
985



UTILITY LEGEND

- SAN — PROPOSED SANITARY LINE
- W — PROPOSED WATER LINE
- PROPOSED STORMWATER PIPING
- PROPOSED CATCH BASIN STRUCTURE
- PROPOSED MANHOLE STRUCTURE / WATER QUALITY UNIT
- PROPOSED WATER STRUCTURES
- PROPOSED SANITARY CLEANOUT

02.28.2022

STORM SEWER CALCULATIONS

Qr = C * I * A
Qp = A x 1.486/nxR^(2/3)x$^{1/2}$
I = 175/(T+25) for 10 year storm event
T = 15 Minutes

AREA NO.	FROM MH/CB	TO MH/CB	Area A acres	AVG. COEFF. C*	A x C	Area TOTAL At	COEFF Wt Cw	At x Cw	TIME Tc min	INT I in/hr	n	FLOW Qr Q=CIA c.f.s	PIPE CAP. Qp c.f.s	PIPE LENGTH ft	PIPE DIA. In	PIPE SLOPE %	VEL. FULL ft/s	TIME FLOW min	RIM ELEV. HIGH ft	RIM ELEV. LOW ft	HIGH END H.G.L	LOW END H.G.L	HIGH END INVERT ft	LOW END INVERT
DA1	CB1	CB2	0.36	0.75	0.27	0.36	0.75	0.27	15.00	4.38	0.0130	1.18	2.02	205	12	0.32	2.5660	1.33	984.00	982.50	978.95	978.29	978.15	977.49
DA2	CB2	CB4	0.35	0.75	0.26	0.71	0.75	0.53	16.33	4.23	0.0130	2.25	2.25	100	12	0.40	2.8690	0.58	982.50	983.75	978.19	977.79	977.39	976.99
									16.91															
DA5	BLDG	CB4	0.05	0.75	0.04	0.05	0.75	0.04	16.91	4.18	0.0130	0.16	1.22	35	8	1.00	3.4700	0.17	985.25	983.75	979.93	979.58	979.40	979.05
									17.08															
DA3	CB3	CB4	0.14	0.75	0.11	0.14	0.75	0.11	15.00	4.38	0.0130	0.46	2.02	143	12	0.32	2.5660	0.93	983.10	983.75	976.90	976.44	976.10	975.64
DA4	CB4	EX CB	0.06	0.75	0.05	0.06	0.75	0.72	16.91	4.18	0.0130	3.01	3.02	26	12	0.72	3.8490	0.11	983.75	979.94	976.34	976.16	975.54	975.36
									17.03															

UTILITY NOTES

1. ALL CONSTRUCTION PROCEDURES AND MATERIALS SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF WHITE LAKE TOWNSHIP A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED BY WHITE LAKE TOWNSHIP AND HELD PRIOR TO THE START OF CONSTRUCTION.
2. CONTRACTOR MUST CONTACT MISS DIG (811) AT LEAST THREE WORKING DAYS PRIOR TO THE START OF CONSTRUCTION FOR UNDERGROUND UTILITY LOCATIONS. ALL UTILITIES SHALL BE STAKED BEFORE CONSTRUCTION BEGINS.
3. ALL WATER MAIN EASEMENTS SHALL BE PROVIDED PRIOR TO CONSTRUCTION AND ACCEPTANCE OF THE WATER DISTRIBUTION SYSTEM.
4. WATER MAINS SHALL BE CONSTRUCTED WITH A MINIMUM COVER OF 6 FEET BELOW FINISHED GRADES, INCLUDING OPEN DRAINAGE COURSES.
5. ALL TRENCHES UNDER OR WITHIN A 1:1 RATIO OF EXISTING OR PROPOSED PAVEMENT OR DRIVEWAYS, SHALL BE BACKFILLED WITH COMPACTED CLASS II SAND TO GRADE (95% MAXIMUM UNIT DENSITY).
6. WHERE TWO UTILITIES CROSS, PROVIDE CLASS II BACKFILL MATERIAL IN SIX (6) INCH COMPACTED LAYERS TO TOP HIGHEST UTILITY.
7. WHERE WATER MAINS DIP UNDER OTHER UTILITIES, THE SECTIONS WHICH ARE DEEPER THAN NORMAL SHALL BE CONSTRUCTED WITH 11-1/4" VERTICAL BENDS, 22 ½° OR 45° BENDS MUST BE RODDED AND PROPERLY ANCHORED.
8. ALL PRECAST CONCRETE GATE WELL SECTIONS SHALL BE IN ACCORDANCE WITH A.S.T.M. C478, STANDARD SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS. WALL THICKNESS SHALL BE AS SHOWN ON THESE DETAILS. ALL JOINTS FOR PRECAST CONCRETE GATE WELL SECTIONS SHALL BE "MODIFIED GROOVE TONGUE" WITH GASKET MANUFACTURED TO CONFORM WITH A.S.T.M. C443, STANDARD SPECIFICATION FOR JOINTS FOR CIRCULAR CONCRETE SEWER AND CULVERT PIPE USING RUBBER GASKETS.
9. CONTRACTOR SHALL INSTALL VALVES, TAPPING SLEEVES, AND GATE WELL STRUCTURES IN STRICT COMPLIANCE WITH MEASUREMENTS PROVIDED ON SHEET 1 (2'-0" BETWEEN GATE WELL WELL AND CENTERLINE OF OPERATING NUT) TO ALLOW PROPER OPERATION OF VALVE THROUGH GATE WELL OPENING.
10. ALL CROSS-CONNECTION CONTROL DEVICES SHALL BE INSTALLED AS REQUIRED BY THE WHITE LAKE TOWNSHIP PLUMBING INSPECTOR AND IN ACCORDANCE WITH THE STANDARDS OF THE OAKLAND COUNTY COUNTY DRAIN COMMISSIONER OPERATION AND MAINTENANCE DIVISION AND THE MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF DRINKING WATER AND RADIOLOGICAL PROTECTION.
11. ALL FITTINGS AND BENDS SHOULD BE BLOCKED IN ACCORDANCE WITH THRUST BLOCK DETAILS, UNLESS ALTERNATE THRUST RESTRAINT SYSTEM, AS INDICATED PLANS AND SPECIFICATIONS, IS APPROVED BY WHITE LAKE TOWNSHIP DEPARTMENT OF PUBLIC SERVICES.
12. THE STORMWATER DISCHARGE FOR THE OUTLET DEVELOPMENT IS OUTLETING INTO INTO EX CB20073. THIS SYSTEM TAKES THE DRAINAGE TO THE EXISTING RETENTION POND (SEE MEIJER DEVELOPMENT PLAN SHEET C303B). THIS POND IS SELF CONTAINED AS SHOWN ON THE EXISTING DRAWINGS AND DOES NOT OUTLET INTO ANY DRAIN OWNED BY WHITE LAKE TOWNSHIP OR OAKLAND COUNTY. THEREFORE ADDITIONAL WATER TREATMENT FOR THE OUTLET DEVELOPMENT ONLY WILL NOT BE PROVIDED.

UTILITY QUANTITIES

12" RCP CL IV STORM PIPE	474 LF
8" sch 40 PVC ROOF LEAD	35 LF
1.5" TYPE K COPPER PIPE	192 LF
6" SCH 40 PVC SAN. PIPE	95 LF
1,000 GAL GREASE TRAP	1
SANITARY MANHOLE	2
CATCH BASIN	4
CLEANOUT STRUCTURE	2
CURB STOP	1
90° BEND	1

UTILITY CROSSING SCHEDULE

UC 1 — GRADE 983.50 ±
TOP OF 12" STORM 678.30
12" STORM INVERT 977.30
BOTTOM OF 1.5" WATER 975.80
(WATERMAIN DIPPED WITH MIN. CLEARANCE 1.5 FT, DIPPING/DEFLECTING OF THE WATERMAIN SHALL FOLLOW APPLICABLE AGENCY STANDARDS)

UC 2 — 6" SAN INVERT 978.61
TOP OF 12" STORM 976.96
12" STORM INVERT 975.96
TOTAL CLEARANCE OF 1.65 FT

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UTILITY PLAN

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGIE LAKE ROAD, WHITE LAKE TWP, MI, 48383

STATE OF MICHIGAN
LICENSED PROFESSIONAL ENGINEER
JOSEPH ROCCO DATTILO
ENGINEER
No. 6201049801

Know what's below. Call before you dig.

NORTH

UTILITY PLAN
SCALE: 1"= 20'

REVISION	DATE	BY	DESCRIPTION
7	05.03.2022	GAE	ENGINEERING REVIEW
6	03.24.2022	GAE	ENGINEERING REVIEW
5	02.28.2022	GAE	ENGINEERING REVIEW
3	11.01.2021	GAE	SPA RESUBMISSION
2	08.02.2021	GAE	ENGINEERING SUBMISSION
1	6.14.2021	GAE	SPA SUBMISSION

DRAWN BY: GAE
CHECKED BY:
DATE: MAY 03, 2022
PROJECT NO: 18-00000
SCALE: 1" = 20'
05/03/2022

C5.0

C:\Users\gdattilo\Desktop\Great Lakes Taco\Highland\Civil\C5.0 Utility Plan.dwg
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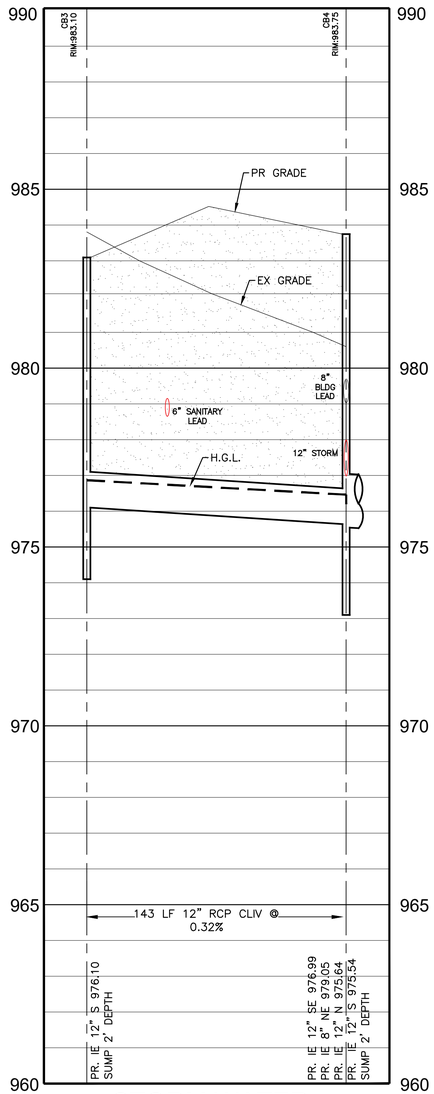
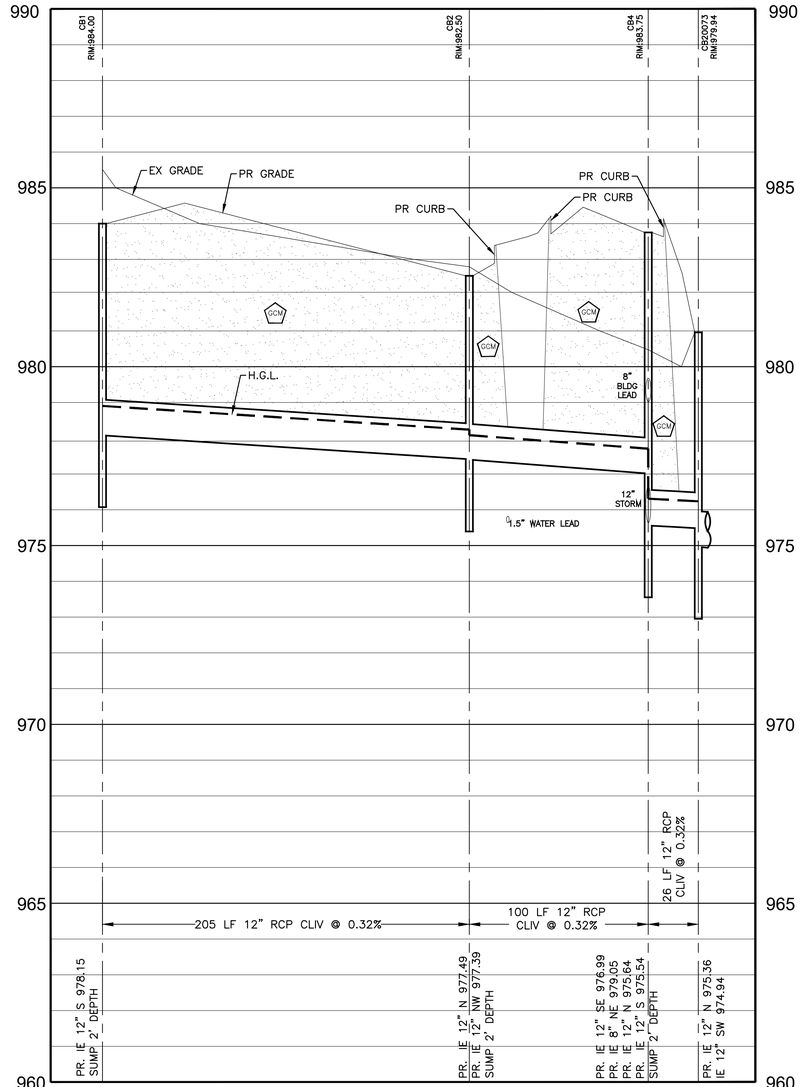


STORM WATER
PROFILE CB3 - CB4

SCALE: 1"= 40' HOR / 1" = 2' VERT



STORM WATER PROFILE CB1-CB 20073

SCALE: 1"= 40' HOR / 1" = 2' VERT

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PROFILES

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGE LAKE ROAD, WHITE LAKE TWP., MI, 48383

NO.	DATE	BY	DESCRIPTION
6	05.03.2022	GAE	ENGINEERING REVIEW
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3	11.01.2021	GAE	SPA RESUBMISSION
2	08.02.2021	GAE	ENGINEERING SUBMISSION

DRAWN BY: GAE 05/03/2022
CHECKED BY:
DATE: MAY 03, 2022
SCALE: 1" = 20'
PROJECT NO. 18-00000

C6.0

C6.0 Profile Plan.dwg
5/13/2022
Daniel Krupp

SOIL EROSION LEGEND

- PROPERTY LINE
- LOD — PROPOSED LIMIT OF DISTURBANCE
- SF — PROPOSED SILT FENCE
- PROPOSED INLET FILTER

SOIL EROSION & SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

CONSTRUCTION SEQUENCE	NOV 2021	DEC	JAN	FEB
TEMPORARY EROSION CONTROL MEASURES				
STRIP & STOCKPILE TOPSOIL / ROUGH GRADE				
STORM SEWER				
FOUNDATION / BLDG. CONSTRUCTION				
SANITARY SEWER & WATER MAIN				
INSTALL ALL OTHER UTILITIES				
SITE CONSTRUCTION & PAVEMENT				
PERMANENT EROSION CONTROL MEASURES				
FINISH GRADING				

DISTURBED AREA =1.06± ACRES

SOIL TYPE INFORMATION

MAP UNIT SYMBOL	MAP UNIT NAME
50B	UDIPSAMMENTS, UNDULATING

MAINTENANCE OF EROSION CONTROL DEVICES

1. FILTERS MUST BE CLEANED PERIODICALLY SO THEY DON'T CLOGGED.
2. FILTER FENCING WHICH SAGS, FALLS OVER OR IS NOT STAKED IN, SHOULD BE PROMPTLY REPAIRED OR REPLACED.
3. SILT FENCES SHOULD BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND SEVERAL TIMES DURING PROLONGED RAINFALLS.
4. IF THE FENCE IS SAGGING OR THE SOIL HAS REACHED ONE HALF THE HEIGHT OF THE FABRIC, THE SOIL BEHIND THE FABRIC MUST BE REMOVED.
5. MULCHED AREAS SHOULD BE CHECKED FOLLOWING EACH RAIN TO ENSURE THE MULCH IS STAYING IN PLACE. ADDITIONAL TACKING MATERIALS OR NETTING MAY NEED TO BE APPLIED TO HOLD THE MULCH IN PLACE.
6. NEWLY SEEDED AREAS NEED TO BE INSPECTED FREQUENTLY FOR THE FIRST FEW MONTHS TO ENSURE THE GRASS IS GROWING. IF THE SEEDED AREA IS DAMAGED DUE TO RUNOFF, ADDITIONAL STORMWATER MEASURES MAY BE NEEDED.

STATE OF MICHIGAN
JOSEPH ROCCO DATTILO
ENGINEER
No. 6201049801
LICENSED PROFESSIONAL ENGINEER

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NORTH

SOIL EROSION & SEDIMENTATION CONTROL PLAN

SCALE: 1"= 20'

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Detroit (313) 757-3637
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SOIL EROSION AND SEDIMENTATION CONTROL PLAN

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGIE LAKE ROAD, WHITE LAKE TWP, MI, 48383

REVISION	DATE	BY	DESCRIPTION
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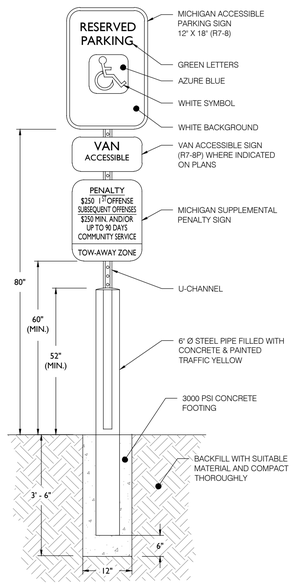
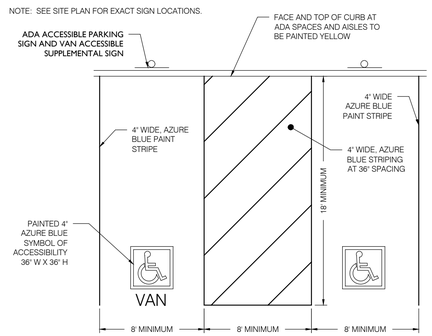
DRAWN BY: GAE 05/03/2022
CHECKED BY:
DATE: MAY 03, 2022
PROJECT NO. 00-00000
SCALE: 1" = 20'

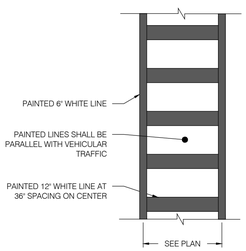
C7.0



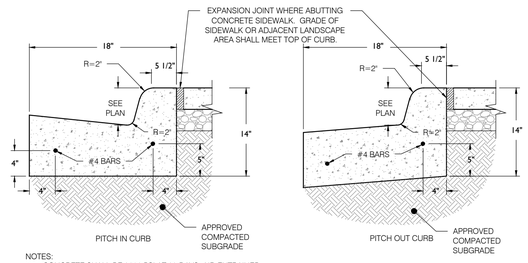
SIGN DETAILS



ACCESSIBLE PARKING STALL MARKINGS

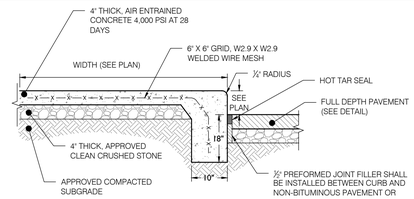


CROSSWALK DETAIL



NOTES:
1. CONCRETE SHALL BE 3500 PSI AT 28 DAYS, AIR-ENTRAINED.
2. TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED ½" FROM SURFACE.
3. HALF DEPTH CONTRACTION JOINTS SHALL BE PROVIDED AT 10 FOOT INTERVALS.
4. 14" CURB DEPTH SHALL BE MAINTAINED AT DEPRESSED OR FLUSH CURBED AREAS.

CONCRETE CURB AND GUTTER DETAIL



NOTES:
1. MAXIMUM CROSS SLOPE SHALL BE ½" PER FOOT.
2. ½" EXPANSION JOINTS SHALL BE PROVIDED AT 12' INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED ½" FROM THE SURFACE.
3. 1" DEEP BY ½" WIDE, TOOLED CONTRACTION JOINTS SHALL BE PROVIDED AT 4' INTERVALS.

INTEGRAL CONCRETE CURB DETAIL

WHITE LAKE TOWNSHIP NOTES

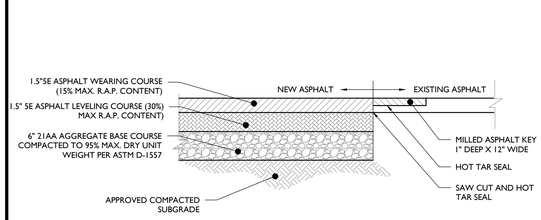
a. All construction shall be in accordance with the Township's current standards and specifications.

b. The Contractor shall notify the Township Engineer and/or the authority having jurisdiction, 48 hours prior to the beginning of construction.

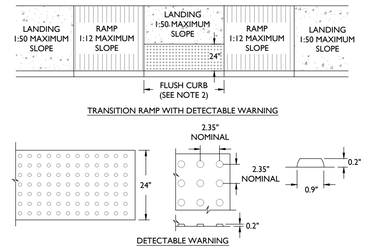
c. Contractor shall contact MISS DIG at 800-482-7171, 72 hours in advance of construction, for existing underground utility locations.

d. In order to verify compliance with approved plans, full-time construction observation will generally be required during all phases of underground site construction including installation of sanitary sewer, storm sewers, drains, watermains and appurtenances as well as private street curbing and paving construction. Intermittent observations will be made for site grading, parking lot curbing and paving, retaining wall construction and other surface activity.

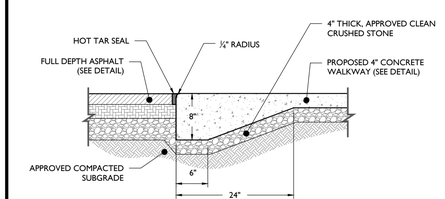
EXISTING DRIVE CONNECTION TO THE EAST SHALL BE BLOCKED OFF DURING CONSTRUCTION SO AS TO PREVENT VEHICLES FROM THIS SITE FROM ENTERING ONTO AND CUTTING ACROSS THE TACO BELL SITE DURING CONSTRUCTION.



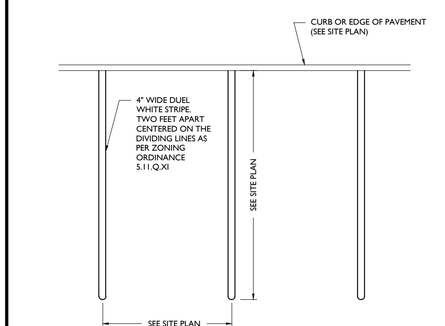
FULL DEPTH ASPHALT PAVEMENT DETAIL



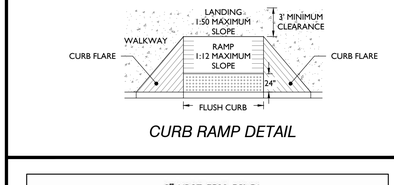
TRANSITION RAMP DETAIL



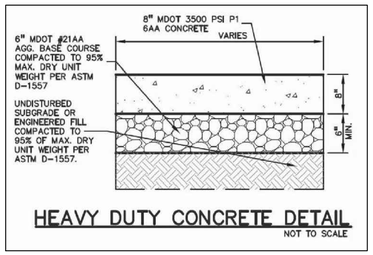
CONCRETE PAVEMENT TO ASPHALT TRANSITION DETAIL



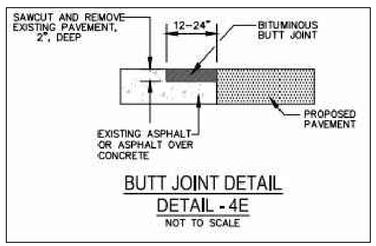
PARKING STALL MARKINGS
NOT TO SCALE



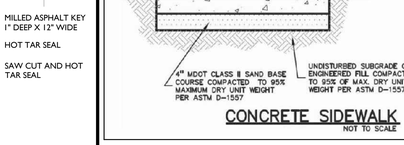
CURB RAMP DETAIL



HEAVY DUTY CONCRETE DETAIL
NOT TO SCALE



BUTT JOINT DETAIL
DETAIL - 4E
NOT TO SCALE



CONCRETE SIDEWALK
NOT TO SCALE

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DETAILS SHEET

PREPARED FOR: GREAT LAKES TACO, LLC.
HIGHLAND (M-59) & BOGIE LAKE ROAD, WHITE LAKE TWP., MI, 48383

NO.	DATE	BY	DESCRIPTION
6	05.03.2022	GAE	ENGINEERING REVIEW
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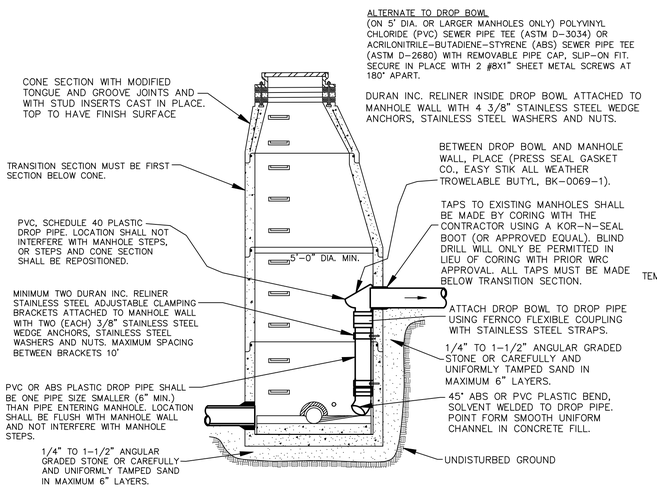
DRAWN BY: GAE 05/03/2022
CHECKED BY:
DATE: MAY 03, 2022
PROJECT NO. 00-00000
SCALE: NOT TO SCALE

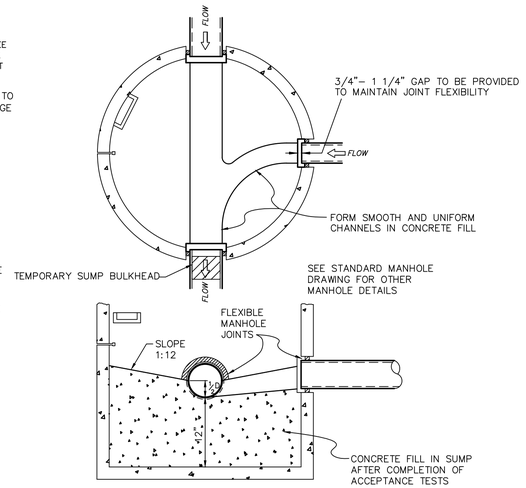
STATE OF MICHIGAN
JOSEPH ROCCO DATTILO
ENGINEER
No. 6201043601
PROFESSIONAL ENGINEERS

C8.0

C8.0 Detail Sheet.dwg
5/13/2022
Daniel Kagan



INTERIOR DROP CONNECTION



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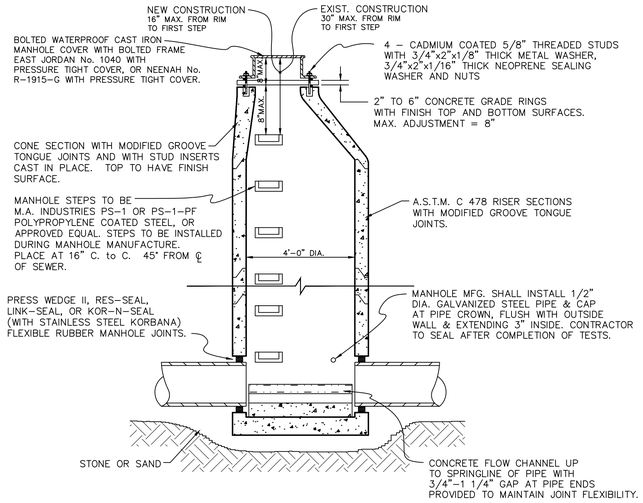
SUMP MANHOLE FOR TESTING, CLEANING, AND DEWATERING



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STANDARD MANHOLE ON 8" THROUGH 24" DIAMETER SEWERS

SANITARY SEWER CONSTRUCTION NOTES

1. All construction shall conform to the current standards and specifications of the local unit of government and the Oakland County Water Resources Commissioner (OCWRC). All sanitary sewer construction shall have full time inspection supervised by a professional engineer provided by or caused to be provided by the local unit of government.

2. At all connections to Oakland County Water Resources Commissioner's sewers or extensions, and before start of construction, the Contractor must obtain a Sewer Inspection Permit issued by the OCWRC. Gravity sewer permit charges are $250.00 for each connection plus $25.00 for each manhole constructed. Pressure sewer permit charges are $250.00 per 2460 L.F. of force main with a minimum permit fee of $250.00. Failure to pass any test segment will result in an additional charge to the Contractor for each retest, in accordance with the above price schedule. The Contractor shall also have posted with the OCWRC a $5,000.00 surety bond and $500.00 cash deposit. The Contractor shall notify the local unit of government and the OCWRC (248-858-1110) 24 hours prior to the beginning of any construction. Final acceptance tests must be witnessed by County personnel and must be scheduled by Municipality or it's consultant in advance with 24 hour notice at 248-858-1110.

3. No sewer installation shall have an infiltration or exfiltration exceeding 100 gallons per inch diameter per mile of pipe in a 24 hour period, and no single run of sewer between manholes shall exceed 100 gallons per inch diameter per mile. Air tests in lieu of infiltration tests shall be as specified in the OCWRC "Acceptance Tests", dated September, 1972. Only pipe and pipe joints approved by the Oakland County Water Resources Commissioner may be used for sanitary sewer construction.

4. Located in the first manhole upstream from the point of all connections to an existing OCWRC sewer, or extension thereto, a temporary 12-inch deep sump shall be provided in the first manhole above the connection which will be filled in after such successful completion of any acceptance test up to the standard fillet provided for the flow channel. A watertight bulkhead shall be provided on the downstream of the sump manhole.

5. All building leads and risers shall be 6-inch S.D.R. 23.5 ABS OR PVC pipe with chemically fused joints, or an approved equal pipe and joint. Sewer pipe wye shall contain factory installed premium joint material of an approved type compatible with that of the building lead pipe used. Building leads to be furnished with removable air tight and water-tight stoppers.

6. All rigid sewer pipe shall be installed in Class "B" bedding or better. All flexible, semi-flexible or composite sewer pipe shall be installed in conformance to the Oakland County Water Resources Commissioner specifications.

7. All new manholes shall have Oakland County Water Resources Commissioner approved flexible, water-tight seals where pipes pass through walls. Manholes shall be of precast sections with modified groove tongue and rubber gasket type joints. Precast manhole cone sections shall be Oakland County Water Resources Commissioner approved modified eccentric cone type. All manholes shall be provided with bolted, water-tight covers.

8. At all connections to manholes on Oakland County Water Resources Commissioner's sewers or extensions thereto drop connections will be required when the difference in invert elevations exceeds 18-inches. Outside drop connections only will be approved.

9. Taps to existing manholes shall be made by coring. The Contractor shall place a KOR-N-SEAL boot (or OCWRC approved equal) after coring is completed. Blind drilling will not be permitted in lieu of coring.

10. New manholes constructed directly on Oakland County Water Resources Commissioner's sewers shall be provided with covers reading "Oakland County - Sanitary" in raised letters. New manholes built over an existing sanitary sewer shall have monolithic poured bottoms.

11. No ground water, storm water, construction water, downspout drainage or weep tile drainage shall be allowed to enter any sanitary sewer installation.

12. Prior to excavation, the Contractor shall telephone MISS DIG (647-7344) for the location of underground pipeline and cable facilities, and shall also notify representatives of other utilities located in the vicinity of the work.

13. 18" minimum vertical separation and 10' minimum horizontal separation must be maintained between sanitary sewer and water main.

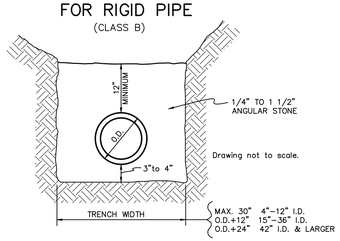
14. Manhole frame and cover shall be as follows: East Jordan heavy manhole cover, base flange type #1040 or Neenah Foundry heavy duty #R-1642 manhole frame. Solid lid cover shall be non-rocking and marked "WHITE LAKE TOWNSHIP SEWER DEPARTMENT."

Drawing not to scale.

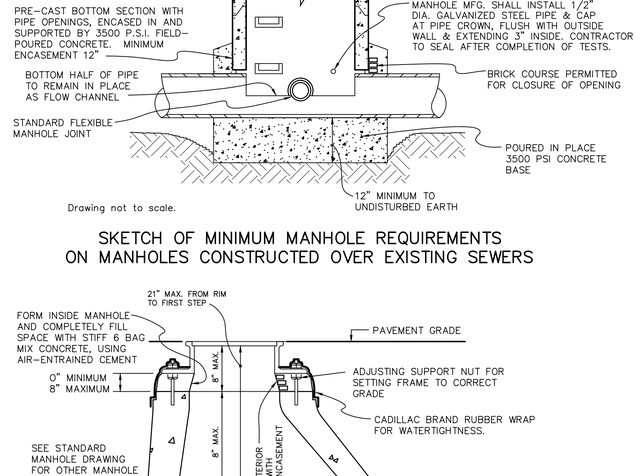
HOUSE/BUILDING LEAD DETAIL

BEDDING DETAIL FOR RIGID PIPE

(CLASS B)



BEDDING DETAIL FOR FLEXIBLE PIPE



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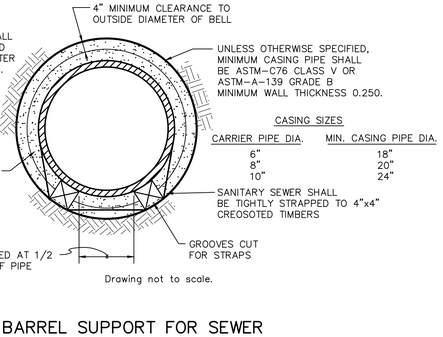
SKETCH OF MINIMUM MANHOLE REQUIREMENTS ON MANHOLES CONSTRUCTED OVER EXISTING SEWERS



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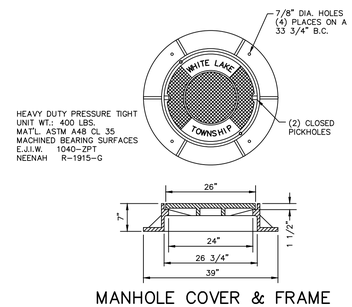
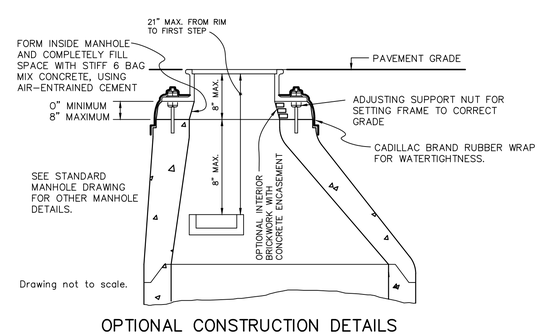
PIPE BARREL SUPPORT FOR SEWER



MANHOLE COVER & FRAME



Drawing not to scale.

OPTIONAL CONSTRUCTION DETAILS

DRAWN: CAD
DESIGN: OA
CHECKED: -

SCALE: VERT. -
HORZ. AS NOTED

REVISIONS	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE
		FIRST ISSUE	09/11/97		OCWRC COMMENTS	11/06/15			
		UPDATED TITLE BLOCK	04/30/13						
		UPDATED NOTES	02/17/15						

Johnson&Anderson

4494 Elizabeth Lake Road
Waterford, Michigan 48328
tel (248) 681-7800 fax (248) 681-2660

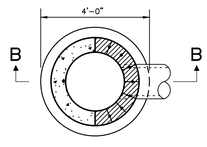
1060 W. Norton Avenue, Suite 7
Muskegon, Michigan 49441
tel (231) 780-3100 fax (231) 780-3115

2291 Water Street, Suite 6
Port Huron, Michigan 48060
tel (810) 987-7820 fax (810) 987-7895

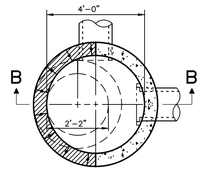
White Lake Township
7525 Highland Road (M-59)
White Lake, Michigan 48383
248-698-3300

SANITARY SEWER STANDARD DETAILS

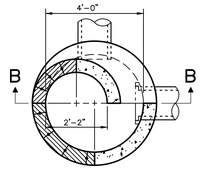
JOB NO.
DATE ISSUED 09/11/97
SHEET NO.



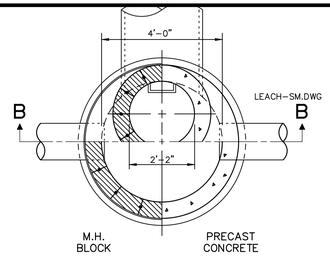
SECTION A–A



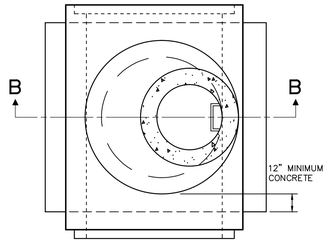
SECTION A–A



SECTION A–A

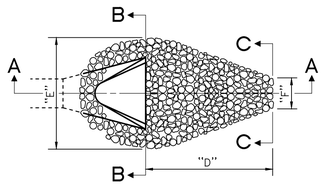


SECTION A–A



SECTION A–A

PIPE DIA.	"D"	"E"	"F"	S.Y.
12"	5'–0"	6'–6"	3'–0"	4
15"	5'–0"	7'–0"	3'–0"	4
18"	5'–0"	7'–6"	3'–6"	4
21"	5'–6"	8'–0"	4'–0"	5
24"	6'–0"	8'–6"	4'–6"	6
27"	6'–6"	9'–0"	5'–0"	7
30"	7'–0"	9'–9"	5'–6"	8
33"	7'–6"	10'–3"	5'–6"	9
36"	8'–0"	10'–9"	6'–0"	10
42"	9'–0"	11'–9"	6'–6"	12
48"	10'–0"	13'–0"	7'–0"	14



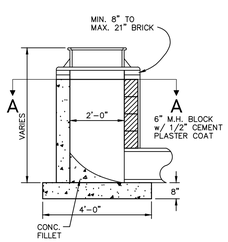
PLAN VIEW

STORM SEWER NOTES

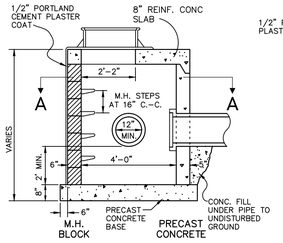
1. PRECAST CONC. RISERS SHALL MEET A.S.T.M. C478
2. DIAMETER OF CONC. BASE: I.D. + 2(WALL) + 8"
3. MANHOLE STEP SPACING SHALL MEET MIOSHA REQUIREMENTS. NO MORE THAN 21" FROM RIM TO FIRST STEP. MAX. 16" O.C. STEPS SHALL BE CAST POLYPROPYLENE REINFORCED WITH A 1/2" STEEL ROD.
4. WALL THICKNESS OF BLOCK STRUCTURES SHALL BE:

DEPTH	THICKNESS
0–8'	6"
8–15'	8"
OVER 15'	12"

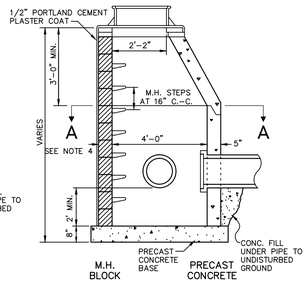
5. MINIMUM I.D. OF STRUCTURE FOR: 36"to 42" = 5'–0"
   48"to 54" = 6'–0"
   LARGER DIAMETER STRUCTURES MAY BE REQUIRED DEPENDING ON PIPING CONFIGURATION.
6. ALL LIFTING HOLES AND VOIDS IN INTERIOR JOINTS SHALL BE FILLED BY MORTAR.
7. THE FINGER DRAIN DETAIL SHALL BE USED AT ALL LOW POINT CATCH BASINS IN PAVEMENT AREAS. THE DETAIL MAY BE OMITTED WITH THE APPROVAL OF THE TOWNSHIP ENGINEER IN AREAS WITH VERY POROUS SOILS AND NO GROUNDWATER PROBLEMS.
8. PRECAST ONE PIECE BASES AND RISERS ARE ACCEPTABLE FOR INLETS, CATCH BASINS AND MANHOLES
9. FRAMES & COVERS WITH INLET CAPACITY (1.0 CFS/90 SQ IN)
   –TRAFFIC AND PARKING AREAS: MDOT "D" (EJIW 5105) 1.9 CFS*
   –REAR YARD AND DITCH INLETS: (EJIW 1040–02) 2.1 CFS*
   –MANHOLES: MDOT "A" (EJIW 1060)
   –CURB AND GUTTER INLETS: MDOT "K" (EJIW 7045) 1.8 CFS*
   –MOUNTABLE CURB & GUTTER: (EJIW 7065) 2.2 CFS*
   –*MAY VARY DUE TO MANUFACTURER CHANGES
10. CONTACT THE TOWNSHIP ENGINEER 48 HOURS PRIOR TO CONSTRUCTION TO SCHEDULE INSPECTION. FULL TIME INSPECTION WILL BE REQUIRED FOR ALL UNDERGROUND STORM SEWER CONSTRUCTION. PHONE (248) 334–9901
11. THE CONTRACTOR SHALL CONTACT MISS DIG 72 HOURS BEFORE CONSTRUCTION AT (800) 482–7171 TO LOCATE EXISTING UNDERGROUND UTILITIES.
12. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL HAVE IN HIS POSSESSION A CURRENT SOIL EROSION CONTROL PERMIT AS ISSUED BY WHITE LAKE TOWNSHIP.
13. A 2' DEEP SUMP SHALL BE USED IN ANY STRUCTURE SUBJECT TO A WATER DROP GREATER THAN 2.0' FROM AN INLET PIPE.
14. ALLOWABLE STORM SEWER PIPE TYPES:
   –12" AND UP: RCP ASTM C–76 MIN. CLASS 3, MIN CLASS 4 UNDER TRAFFIC AREAS, RUBBER JOINT
   –6" TO 15": SCH 40 PVC OR SDR 23.5 PVC WITH RUBBER OR GLUE JOINT
   –6" TO 48": SMOOTH BORE CORRUGATED HIGH DENSITY POLYETHYLENE WITH NEOPRENE LINED JOINTS OR BETTER
15. THE MINIMUM PIPE SIZE IN PUBLIC RIGHT–OF–WAY OR EASEMENTS AND FOR PIPES CARRYING OFF–SITE STORM WATER SHALL BE 12"
16. ALL PIPE ENDS NOT WITHIN A STRUCTURE SHALL HAVE A CONCRETE OR METAL FLARE END SECTION (FES) WITH A BAR SCREEN ON PIPES 18" AND LARGER EXCEPT THOSE WITHIN A SECURE FENCED AREA NEED NO BAR SCREEN.
17. ALL DRAINAGE STRUCTURES WITHIN THE ROAD SHALL BE SEALED WITH WRAPPED GEOTEXTILE PER RCOC STANDARDS



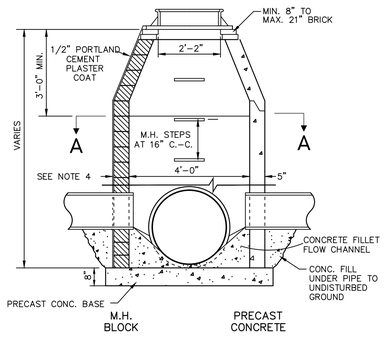
SECTION B–B
24" INLET



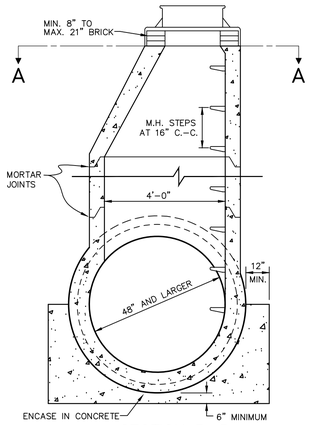
SECTION B–B
STRUCTURE WITH SLAB COVER
(CATCH BASIN SHOWN)



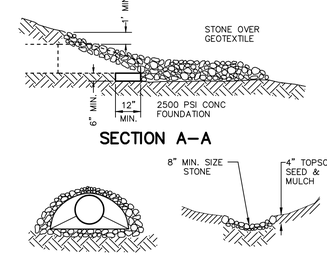
SECTION B–B
STANDARD CATCH BASIN



SECTION B–B
STANDARD STORM MANHOLE



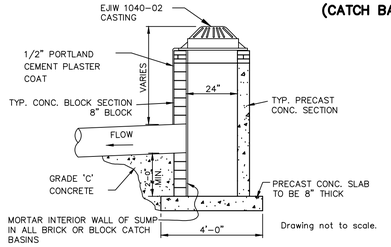
SECTION B–B
STANDARD PRECAST CONCRETE MANHOLE TEE



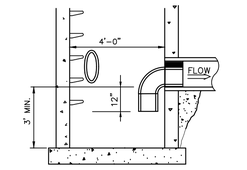
SECTION A–A

SECTION B–B SECTION C–C

PLAIN STONE RIP–RAP



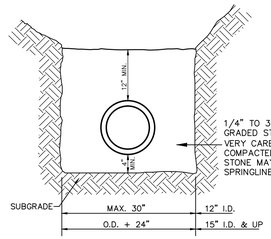
STANDARD REAR YARD CATCH BASIN



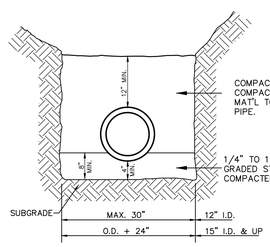
TRAP SHALL BE BULKHEADED IN OUTLET PIPE AND SHALL BE A SCH 40 PVC ASSY WITH A PIPE AREA NO LESS THAN 50% OF THE OUTLET PIPE.

ALTERNATE: USE "THE SNOUT" BASIN TRAP SYSTEM

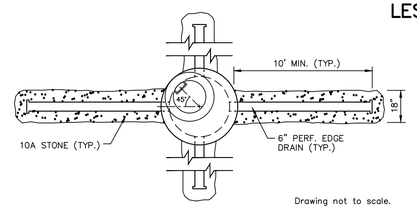
TRAPPED CATCH BASIN



PIPE BEDDING
FOR PLASTIC PIPE

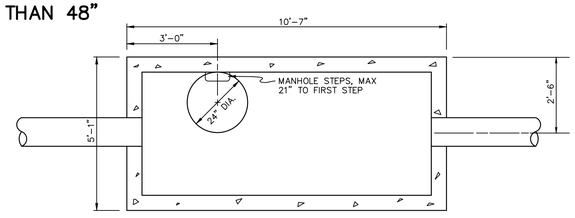


CLASS "B" BEDDING
FOR SEWER PIPE
LESS THAN 48"

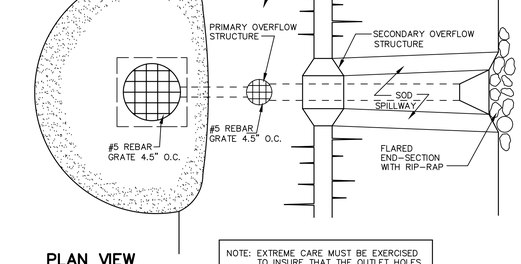


Drawing not to scale.

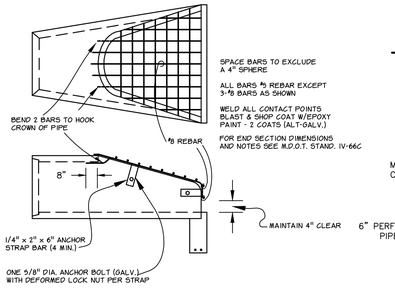
PLAN



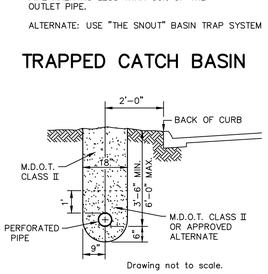
PLAN VIEW



NOTE: EXTREME CARE MUST BE EXERCISED TO INSURE THAT THE OUTLET HOLES IN THE STANDPIPE, DO NOT BECOME CLOGGED WITH SEDIMENT.



BAR SCREEN DETAIL



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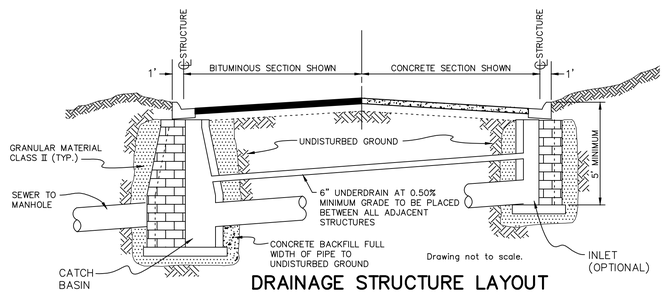
EDGE DRAIN DETAIL



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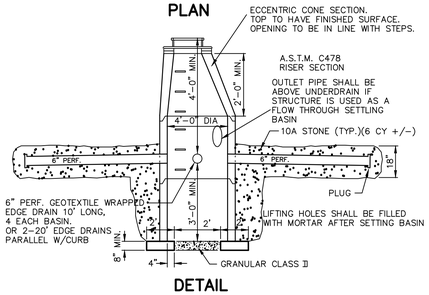
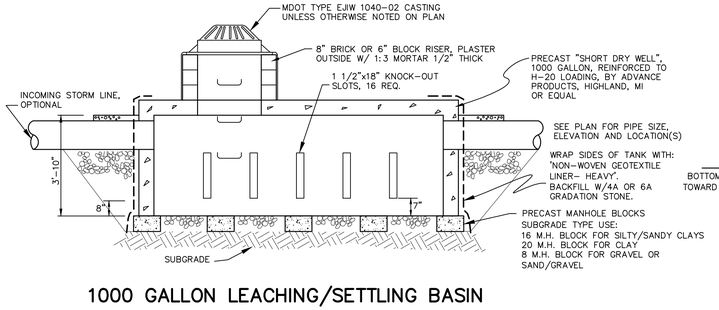
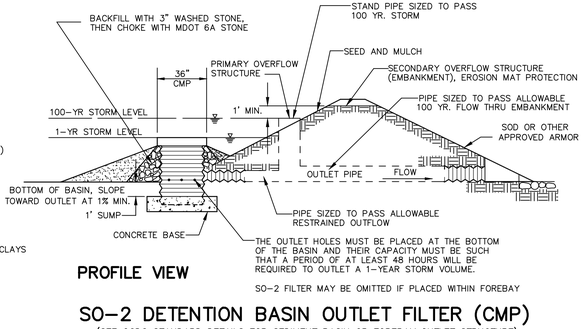
DRAINAGE STRUCTURE LAYOUT



DETAIL
STANDARD LEACHING BASIN



1000 GALLON LEACHING/SETTLING BASIN



PROFILE VIEW

SO–2 DETENTION BASIN OUTLET FILTER (CMP)

(SEE OCDC STANDARD DETAILS FOR SEDIMENT BASIN OR FOREBAY OUTLET STRUCTURE)

DRAWN: CAD
DESIGN: OA
CHECKED: –

SCALE: VERT. –
HORZ. AS NOTED

REVISIONS

MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE
	FIRST ISSUE	08/16/95		REVISE	10–03–02		REVISE	06–01–07
	ADD SO–1	06–17–96		REVISE	12–17–03		UPDATED TITLE BLOCK	04/30/13
	NEW BAR GRATE	11–03–97		SEC REFERENCE	05–17–05			

Johnson&Anderson

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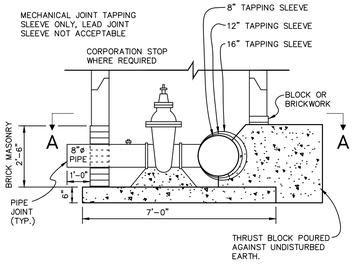
White Lake Township
7525 Highland Road (M-59)
White Lake, Michigan 48383
248-698-3300

STORM SEWER STANDARD DETAILS

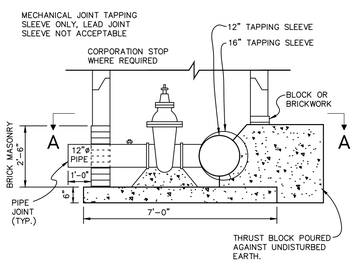
JOB NO.

DATE ISSUED 08/16/95

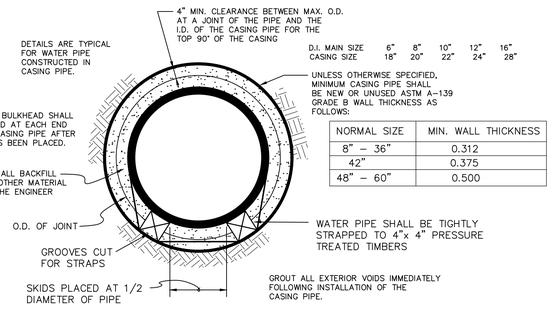
SHEET NO.



16" X 8", 12" X 8", 8" X 8"
TAPPING SLEEVE, VALVE & WELL
(B-B)



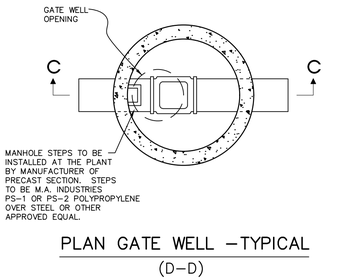
16" X 12", 12" X 12"
TAPPING SLEEVE, VALVE & WELL
(B-B)



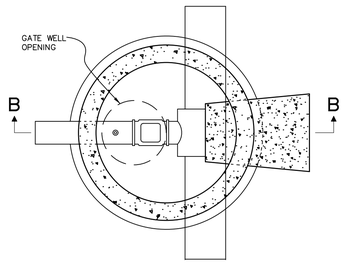
NORMAL SIZE	MIN. WALL THICKNESS
8" - 36"	0.312
42"	0.375
48" - 60"	0.500

Drawing not to scale.

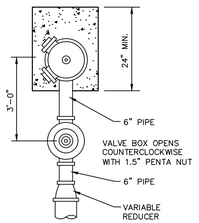
PIPE BARREL SUPPORT FOR WATER MAIN
CONSTRUCTED IN CASING

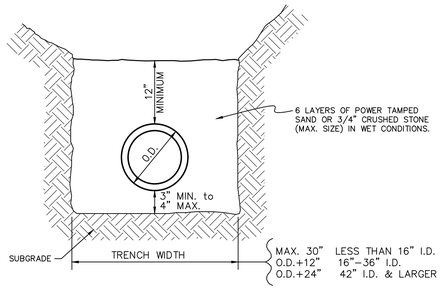


PLAN GATE WELL -TYPICAL
(D-D)



PLAN TAPPING SLEEVE, VALVE & WELL -TYPICAL
(A-A)





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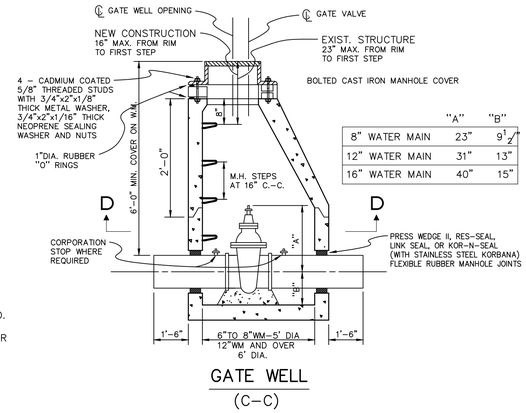
STANDARD BEDDING
FOR WATER PIPE



	"A"	"B"
8" WATER MAIN	23"	9 1/2"
12" WATER MAIN	31"	13"
16" WATER MAIN	40"	15"

GATE WELL
(C-C)

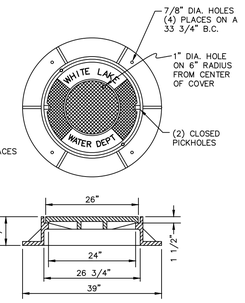
WATER MAIN NOTES

1. All construction procedures and materials used on this project shall conform to White Lake Township current standards and specifications.
2. All hydrants shall be East Jordan Iron Works 5BR-250 traffic model. Self-draining hydrants shall not be used. Valve shall have 1-1/2" pentagon nut and shall open counter-clockwise. Provide two 4.5" pumper outlets with 5" Storz quick connect nozzles (Harrington Integral Hydrant Storz, Model HIHS) as manufactured by Harrington, Inc. of Erie, PA.
3. All hydrants shall be field painted with a heavy coat of bright safety red polyurethane or alkyd gloss enamel, except for the Storz fittings and caps, which shall be left unpainted.
4. Johnson and Anderson, Inc. field personnel will affix to the fixed collar of each Storz connection 1" wide 3M Scotch reflective tape, color coded per NFPA 291 guidelines flow capacity.
5. All water mains shall be ductile iron pipe Class 54, cement lined with push on joints. Mechanical joints allowed only for tapping sleeves, hydrants & hydrant valves. Only Cor-Blue bolts shall be used for assembling mechanical joints. All bends, tees, valves and hydrant tees shall have a poured concrete thrust block as detailed on this sheet. Joints which have thrust blocks bearing on soil of questionable stability shall be fully restrained utilizing Tyler swivel ells and adapters or a system approved by the Township Engineer. HDPE pipe for directional boring, if approved by the Township Engineer, shall meet all of the requirements of the MDEQ and shall be DR9 (200 psi), and shall have two #8 tracer wires, terminated in the nearest gate well at the highest step.
6. Tapping sleeve shall be mechanical joint or approved equal. Ductile Iron or Stainless steel are allowed.
7. Specifications shall include direction of operation of all valves. All valves shall be counter clockwise open.
8. All necessary easements shall be provided in the name of White Lake Township before acceptance of the water distribution system.
9. The design engineer shall furnish White Lake Township with one reproducible sets of "As-Built" water main plans or an AutoCAD file upon completion of the job.
10. All required cross-connection devices shall be installed as required by the local plumbing inspector and in accordance with the standards of the Michigan Department of Public Health.
11. Gate well frame and cover shall be as follows: East Jordan heavy manhole cover, base flange type #1040 or Neenah Foundry heavy duty #R-1642 Manhole frame, solid lid cover shall be non-rocking and marked "White Lake Water Department"
12. Gate valves shall be AWWA approved and of a double disc or resilient wedge design with push on joints, 16" gate valves may be mechanical joint provided Cor-Blue bolts are used. All gate valves with operating nuts greater than 5' below ground surface shall be provided with an extension stem. The length of the extension shall be such that it will be within 5' of the ground surface when an extension is used it shall be held in place by an extension stem guide suitably fastened to the wall of the gate well.
13. 1" corporation stops are to placed on the main at each side of each main line gate valve and at such other locations as may be required by the engineer.
14. All pipe and fittings shall be subjected to a hydro-static pressure test of 150 PSI for a 2 hour duration; Township Engineer must be present. Maximum segment 2000 feet except that longer segments may be tested with allowable leakage based on 2000 feet.
15. 2 consecutive safe bacteria samples shall be taken from the water system approx. 24 hours apart at points established by the Township Engineer. Samples shall be taken by the Township Engineer.
16. Filling, flushing and sampling of water main can only be performed with a "Jumper" Line, the jumper shall be equipped with an approved RPZ type of backflow preventer.
17. Adjustments on gate wells shall be limited to 23" maximum from top of rim to first step in accordance with MIOSHA Rule 341.
18. All new water service lines shall have a minimum nominal size of 1". Services from 1" to 2" may be type K copper tubing or plastic DR-9 (200 PSI rated) meeting ASTM D2737-03 (Standard Specification for Polyethylene (PE) plastic tubing). ASTM Designation and pressure rating shall be stamped on the pipe by the manufacturer. Plastic pipe shall also meet AWWA C-901 Specifications. All sizes shall relate to the copper tubing outside diameter standard size (CTS). Copper pipe joints shall be flared. Fittings shall adapt to the plastic pipe with compression to iron pipe thread adapter. Plastic pipes shall be either compression style with a steel insert or may be fusion welded in the larger sizes.

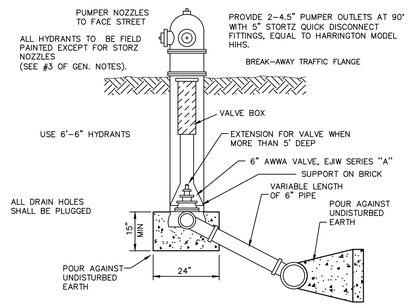
    Plastic water service pipes shall be traced with two #10 copper tracer wires or two #12 copper coated steel or stainless steel wires insulated with a minimum of 30 mils of polyethylene insulation. The tracer wires shall be terminated to supply line so as to be locatable at the building and the curb box without digging.

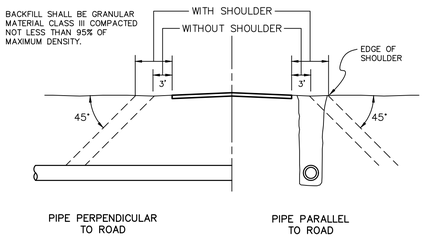
    Water services sizes 3" and greater shall be Class 54 cement lined ductile iron with push on joints or HDPE DR-9 (200 PSI rated) with fusion welded joints and fittings, DIPS (Ductile Iron Pipe Size).

    A stop box shall be installed at the property or easement line and shall be equivalent to an A.Y. McDonald Mfg. 6100 flare regular pattern ball valve. The curb box shall have a 1" riser pipe with an Erie 2-hole pattern cover equivalent to A.Y. McDonald Mfg. 5601L. Stop box shall be protected with a 2"x4" painted blue extending 4 feet above ground.
19. Standard pipe cover shall be 6'-0".
20. Air release manholes shall consist of a standard 5' diameter gate well style structure with a ValMatic Model 25C air release valve mounted on a 1" corporation stop. Air release shall be equipped with the vacuum check option. A 1/2" diameter galvanized pipe air discharge shall be extended to within 12" of the top of the structure. A gooseneck trap shall be installed at the top of the riser to prevent debris & water from entering the valve.

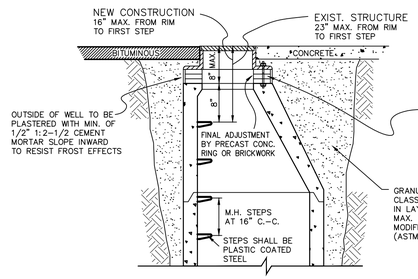


GATE WELL COVER & FRAME

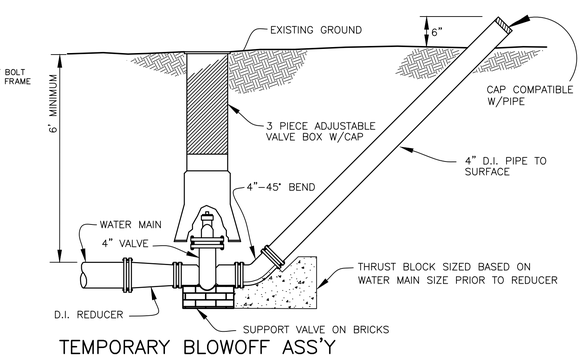




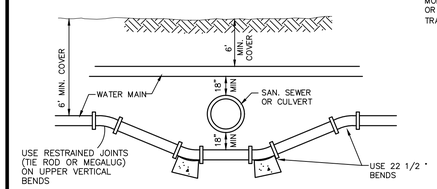
BACKFILL IN THE AREA OF STREETS,
ALLEYS, SIDEWALKS, DRIVES & PARKING AREAS



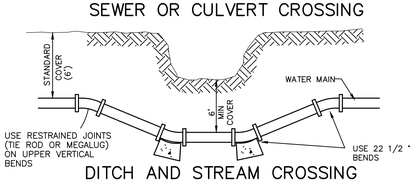
GATE WELL TOPS WITHIN PAVEMENT AREAS



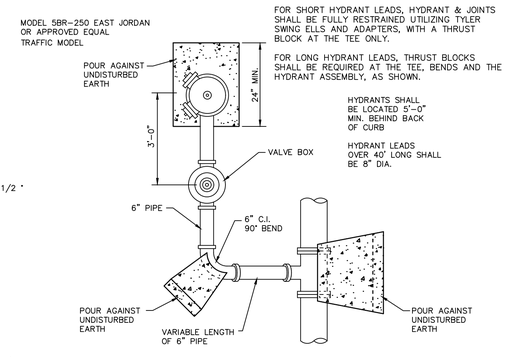
TEMPORARY BLOWOFF ASS'Y



SEWER OR CULVERT CROSSING

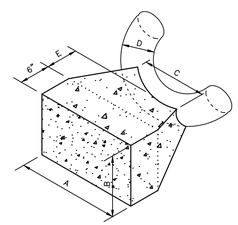


DITCH AND STREAM CROSSING



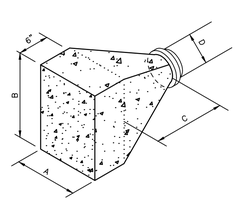
DETAIL OF HYDRANT SETTINGS

NOTE: 3000 PSI CONCRETE TO BE USED. THRUST BLOCK TO ABUT & REST AGAINST UNDISTURBED SOIL. RESTRAINED JOINTS WILL BE REQUIRED IF SOIL STABILITY IS QUESTIONABLE.



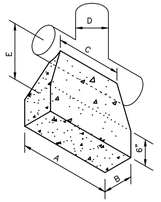
FOR 90° BENDS OR SMALLER

D	A	B	C	E MIN
20"	8"	6.5'	3.5'	2.5'
16"	6"	4'	2.5'	2'
12"	4"	3'	2'	1.75'
10"	3'	3'	2'	1.75'
8"	3'	2'	2'	1.5'
6"	2"	1.5'	2'	1.25'



FOR PLUGS

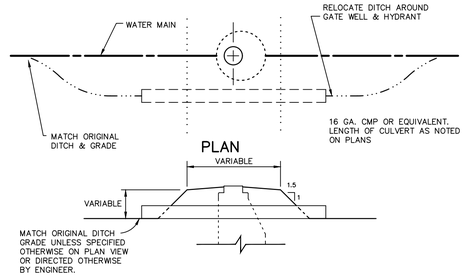
D	A	B	C MIN
20"	7'	5'	2.5'
16"	4.8'	4.8'	2'
12"	4.3'	3'	1.75'
10"	3'	2'	1.5'
8"	2.8'	2.5'	1.5'
6"	1.5'	1.5'	0.25'



FOR TEES

D	A	B	C	E MIN
20"	6.5'	4.5'	3.5'	3'
16"	4.7'	4.7'	2.5'	2.75'
12"	4'	3'	2.5'	2.5'
10"	3'	2'	2'	2.25'
8"	2.7'	2'	2'	2.25'
6"	2'	2'	2'	2.25'

THRUST BLOCK DETAILS



PROFILE
DITCH ENCLOSURE AT GATE WELL

DRAWN: CAD
DESIGN: OA
CHECKED: --

SCALE: VERT. --
HORZ. AS NOTED

REVISIONS

MARK	ADDENDUM/CHANGE ORDER	DATE
	GENERAL REVISION TO CAD	12/29/95
	ADD NOTE 17	11/04/97
	REVISE HYD. & THRUSTING	05/18/98
	GW & NUT SIZE	07/23/98
	PIPE CIVER & FLANGE TAPE	05/12/99
	ADD BLOWOFF	07/06/99
	ADD NOTE 19	07/23/03
	CLARIFY HYD. SPEC	02/07/01
	5-BR HYD, WS STAKE	02/27/02
	UPDATED TITLE BLOCK	04/30/13
	REV. HYD, THRUST, AIR REL.	03/29/04
	HDPE, HYD, VALVES	07/18/05

Johnson&Anderson
4494 Elizabeth Lake Road
Waterford, Michigan 48328
tel (248) 681-7800 fax (248) 681-2660

1060 W. Norton Avenue, Suite 7
Muskegon, Michigan 49441
tel (231) 780-3100 fax (231) 780-3115

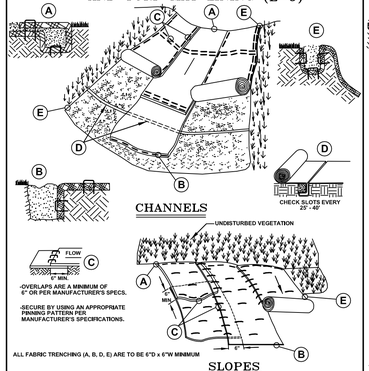
2291 Water Street, Suite 6
Port Huron, Michigan 48060
tel (810) 987-7820 fax (810) 987-7895

White Lake Township
7525 Highland Road (M-59)
White Lake, Michigan 48383
248-698-3300

WATER MAIN STANDARD DETAILS

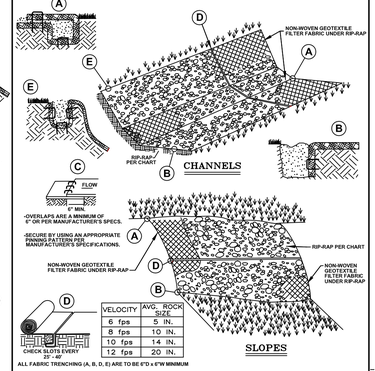
JOB NO.
DATE ISSUED
SHEET NO.

EROSION CONTROL BLANKETS AND TURF MAT LINING (E-9)



DEPENDING ON THE VELOCITY, SLOPE, SOILS, USE PROPER BLANKET OR TURF MAT LINING PER MANUFACTURER'S SPECIFICATIONS TO HANDLE THE SHEER STRESSES OF THE SLOPE/CHANNEL.

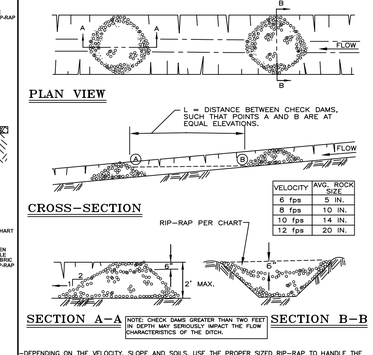
RIP-RAP: CHANNELS AND SLOPES (E-10)



VELOCITY	AVG. ROCK SIZE
5 fps	5 IN.
8 fps	10 IN.
10 fps	14 IN.
12 fps	20 IN.

DEPENDING ON THE VELOCITY, SLOPE AND SOILS, USE THE PROPER SIZED RIP-RAP AND NON-WOVEN GEOTEXTILE FABRIC TO HANDLE THE SHEER STRESS OF THE SLOPE/CHANNEL.

CHECK DAMS (E-3)



VELOCITY	AVG. ROCK SIZE
6 fps	5 IN.
8 fps	10 IN.
10 fps	14 IN.
12 fps	20 IN.

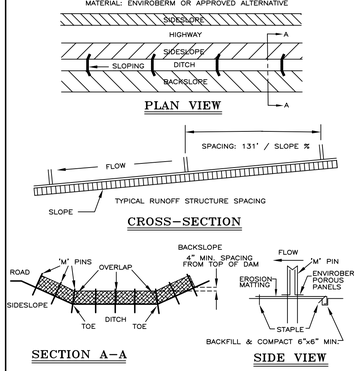
NOTE: CHECK DAMS GREATER THAN TWO FEET IN DEPTH MAY SERIOUSLY IMPACT THE FLOW CHARACTERISTICS OF THE DITCH.

-DEPENDING ON THE VELOCITY, SLOPE AND SOILS, USE THE PROPER SIZED RIP-RAP TO HANDLE THE SHEER STRESS OF THE SLOPE/CHANNEL.

-FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

CHECK DAMS ALTERNATIVE "A" (E-3A)

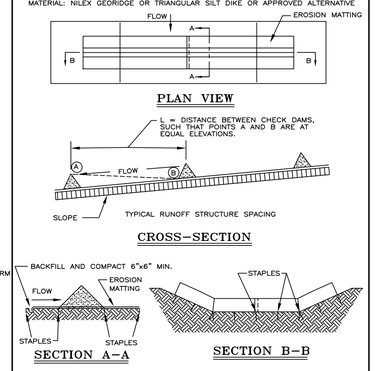
MATERIAL: ENVIROBERM OR APPROVED ALTERNATIVE



-FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

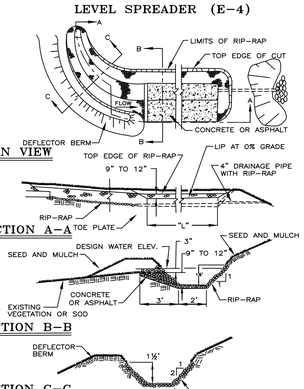
CHECK DAMS ALTERNATIVE "B" (E-3B)

MATERIAL: NILEX GEORIDGE OR TRIANGULAR SILT DIKE OR APPROVED ALTERNATIVE

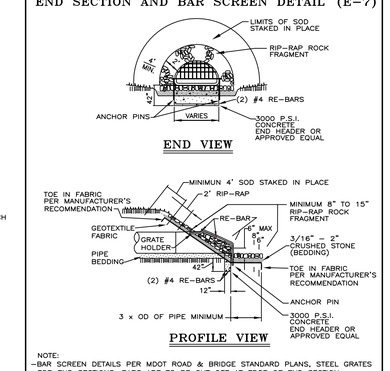


-FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

LEVEL SPREADER (E-4)



RIP-RAP, END SECTION AND BAR SCREEN DETAIL (E-7)

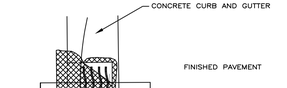


NOTE:
-BAR SCREEN DETAILS PER MDOT ROAD & BRIDGE STANDARD PLANS, STEEL GRATES FOR END SECTIONS. BARS ARE TO BE CUT OFF AT EDGE OF END SECTION.
-FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

VEGETATIVE BUFFER ZONE (SP-1)

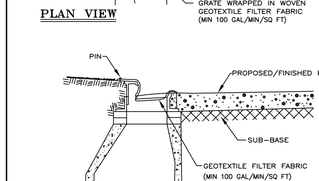
THE GRAPH SHOWN BELOW IS USED TO DETERMINE THE ADEQUACY OF AN EXISTING VEGETATIVE BUFFER ZONE FOR USE AS A SEDIMENT FILTER. THIS GRAPH IS ONLY APPLICABLE IF THE VEGETATION IS 90% DENSE AND AT LEAST 1" IN LENGTH OVER EVERY SQUARE FOOT OF DISTURBED SOIL. AN AREA COVERED WITH WEEDS, OR BUSHES AND TREES WITHOUT A GOOD GROUND COVER IS NOT ACCEPTABLE.

EXAMPLE



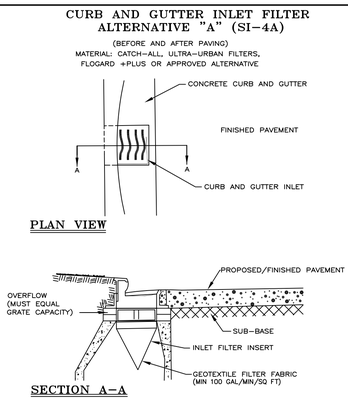
LENGTH OF BUFFER ZONE = ?
% OF SLOPE OF BUFFER ZONE = 5%
WHAT IS THE ACCEPTABLE LENGTH OF THE BUFFER ZONE?

PLOT IN GRAPH BELOW
BUFFER ZONE IS ACCEPTABLE AT 65'



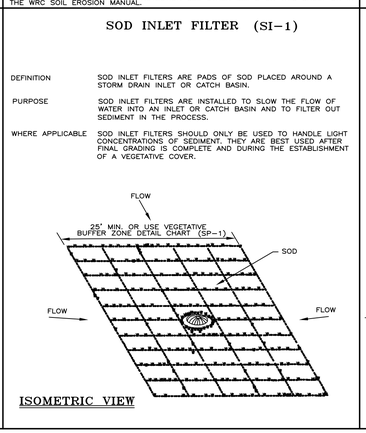
SILT FENCE (SP-2)

(MATERIAL: AMOCO PRO PEX 2130 OR APPROVED EQUIVALENT)



SILT FENCE ALTERNATIVE "A" (SP-2A)

(MATERIAL: SILT SHIELD OR APPROVED EQUIVALENT)



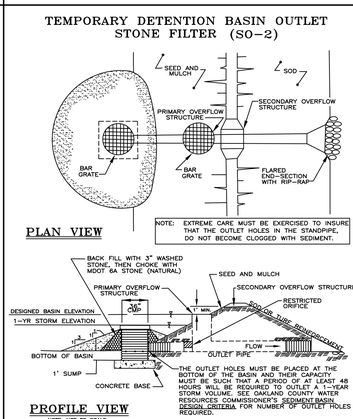
2% GRADE MAXIMUM SLOPE

Splicing Procedure:
Splicing EXTRUDED SEDIMENT FILTER FENCE is achieved beginning with an overlap of a min. of 8" of the EXTRUDED SEDIMENT FILTER FENCE ends being spliced. Place one plastic retainer post push-in fastener to locate those ends with one directly vertically, at least 1" from each edge of the splice.

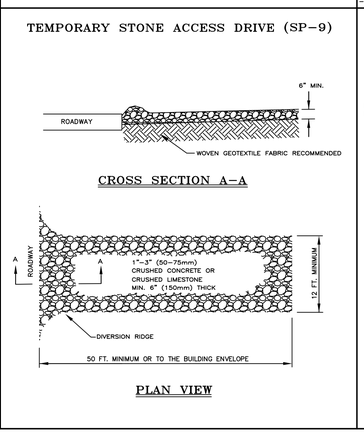
Optional Heat Splicing:
Overlap a minimum of eight inches. Melt a thin layer of EXTRUDED SEDIMENT FILTER FENCE with torch from top to bottom, immediately press both layers together for a minimum of 5 second. Check for total lamination from top to bottom of material. (Do not apply heat to filter)

WINTER/FROZEN GROUND SILT FENCE (SP-2W)

(MATERIAL: AMOCO PRO PEX 2130 OR APPROVED EQUIVALENT)

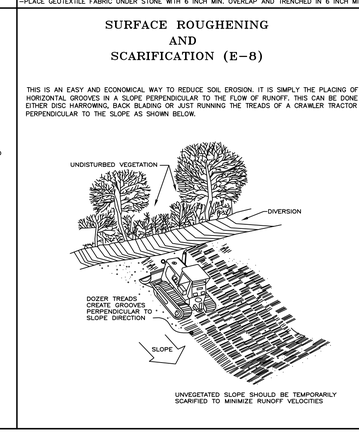


RYCB INLET FILTER (SI-3)



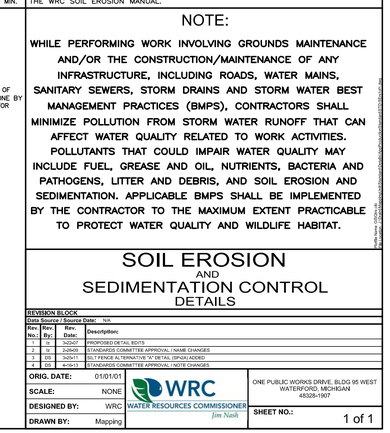
NOTE: MATERIAL IS NOT SILT FENCE MATERIAL

RYCB INLET FILTER ALTERNATIVE "A" (SI-3A)



RYCB INLET FILTER ALTERNATIVE "B" (SI-3B)

MATERIAL: SILT SAVER OR APPROVED ALTERNATIVE



(NOTE: NO PIT REQUIRED WHEN FRAME AND COVER OR GRATE AND COVER ARE IN PLACE.)

EARTH DIVERSION BERM WITH STONE OUTLET FILTER (SP-4)

EARTH DIVERSION BERM (E-2)

GRAVEL INTERCEPTOR DIKE (SP-6)

-PLACE GEOTEXTILE FABRIC UNDER STONE WITH 6 INCH MIN. OVERLAP AND TRENCHED IN 6 INCH MIN. -FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

LOW POINT INLET FILTER (SI-2)

ALTERNATIVE INLET FILTER MUST BE USED IN AREAS THAT MAY BECOME A SAFETY HAZARD DUE TO FLOODING OR FREEZING.

LOW POINT INLET FILTER ALT. "A" (SI-2A)

MATERIAL: CATCH-ALL, ULTRA-URBAN FILTERS, FLOGARD +PLUS OR APPROVED ALTERNATIVE

SILT FENCE GRAVEL FILTER (SP-3)

-PLACE GEOTEXTILE FABRIC UNDER STONE WITH 6 INCH MIN. OVERLAP AND TRENCHED IN 6 INCH MIN.

DITCH SEDIMENT TRAP (SO-4)

NOTE:
FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THE SHEET OR IN THE WRC SOIL EROSION MANUAL.

CURB AND GUTTER INLET FILTER (SI-4)

(BEFORE AND AFTER PAVING)

ALTERNATIVE INLET FILTER MUST BE USED IN AREAS THAT MAY BECOME A SAFETY HAZARD DUE TO FLOODING OR FREEZING.

CURB AND GUTTER INLET FILTER ALTERNATIVE "A" (SI-4A)

(BEFORE AND AFTER PAVING)

MATERIAL: CATCH-ALL, ULTRA-URBAN FILTERS, FLOGARD +PLUS OR APPROVED ALTERNATIVE

SOD INLET FILTER (SI-1)

DEFINITION	SOD INLET FILTERS ARE PADS OF SOD PLACED AROUND A STORM DRAIN INLET OR CATCH BASIN.
PURPOSE	SOD INLET FILTERS ARE INSTALLED TO SLOW THE FLOW OF WATER INTO AN INLET OR CATCH BASIN AND TO FILTER OUT SEDIMENT IN THE PROCESS.
WHERE APPLICABLE	SOD INLET FILTERS SHOULD ONLY BE USED TO HANDLE LIGHT CONCENTRATIONS OF SEDIMENT. THEY ARE BEST USED AFTER FINAL GRADING IS COMPLETE AND DURING THE ESTABLISHMENT OF A VEGETATIVE COVER.

TEMPORARY DETENTION BASIN OUTLET STONE FILTER (SO-2)

TEMPORARY STONE ACCESS DRIVE (SP-9)

SURFACE ROUGHENING AND SCARIFICATION (E-8)

THIS IS AN EASY AND ECONOMICAL WAY TO REDUCE SOIL EROSION. IT IS SIMPLY THE PLACING OF HORIZONTAL GROOVES IN A SLOPE PERPENDICULAR TO THE FLOW OF RUNOFF. THIS CAN BE DONE BY EITHER DISC HARROWING, BACK BLADING OR JUST RUNNING THE TREADS OF A CRAWLER TRACTOR PERPENDICULAR TO THE SLOPE AS SHOWN BELOW.

UNVEGETATED SLOPE SHOULD BE TEMPORARILY SCARIFIED TO MINIMIZE RUNOFF VELOCITIES

NOTE:

WHILE PERFORMING WORK INVOLVING GROUNDS MAINTENANCE AND/OR THE CONSTRUCTION/MAINTENANCE OF ANY INFRASTRUCTURE, INCLUDING ROADS, WATER MAINS, SANITARY SEWERS, STORM DRAINS AND STORM WATER BEST MANAGEMENT PRACTICES (BMPS), CONTRACTORS SHALL MINIMIZE POLLUTION FROM STORM WATER RUNOFF THAT CAN AFFECT WATER QUALITY RELATED TO WORK ACTIVITIES. POLLUTANTS THAT COULD IMPAIR WATER QUALITY MAY INCLUDE FUEL, GREASE AND OIL, NUTRIENTS, BACTERIA AND PATHOGENS, LITTER AND DEBRIS, AND SOIL EROSION AND SEDIMENTATION. APPLICABLE BMPS SHALL BE IMPLEMENTED BY THE CONTRACTOR TO THE MAXIMUM EXTENT PRACTICABLE TO PROTECT WATER QUALITY AND WILDLIFE HABITAT.

SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

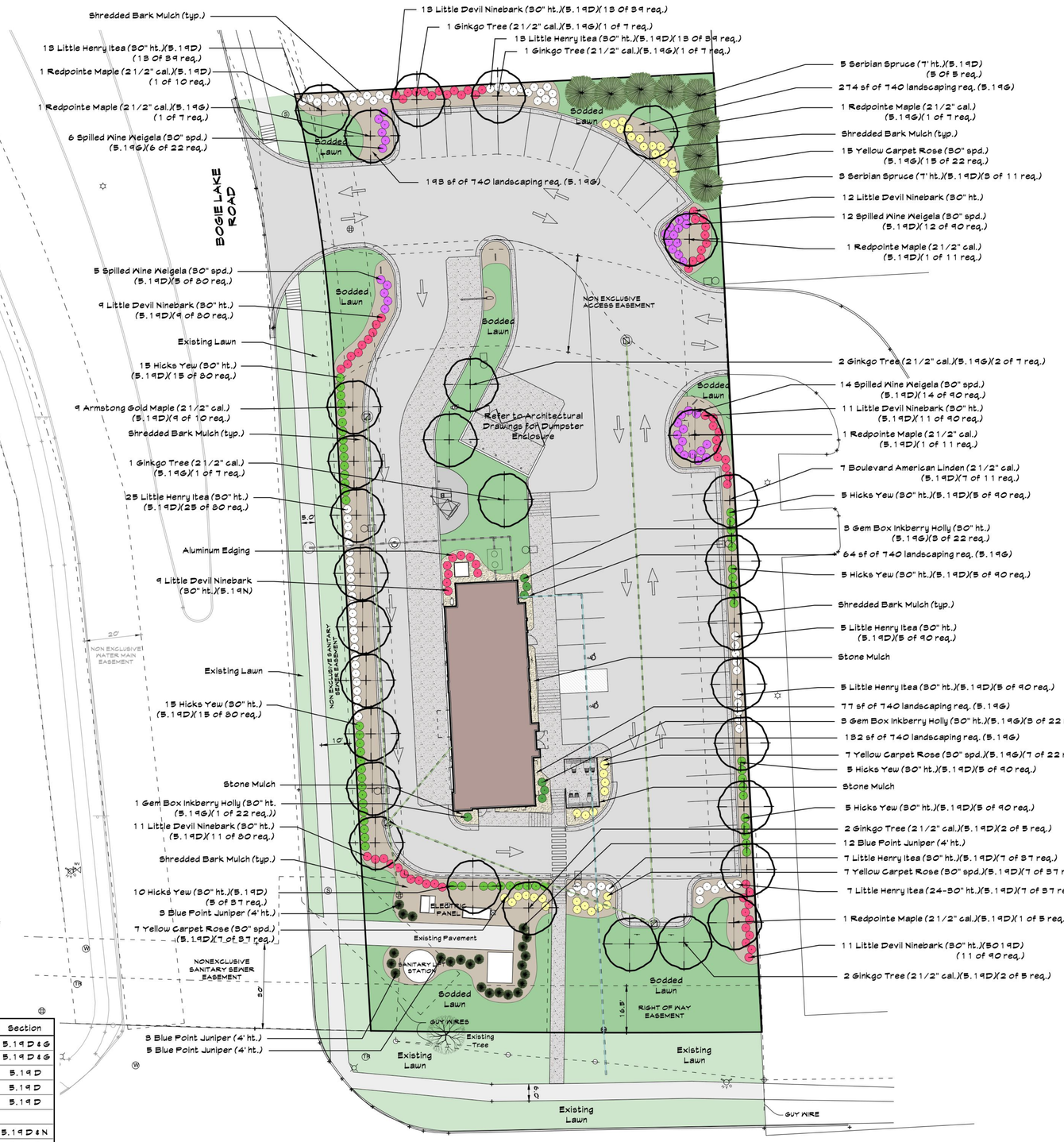
REVISION BLOCK			
Date Source / Source Date:		N/A	
Rev. No.:	Rev. By:	Rev. Date:	Description:
1	W	3-23-07	PROPOSED DETAIL EDITS
2	W	3-29-07	STANDARDS COMMITTEE APPROVAL / NAME CHANGES
3	SS	3-29-11	SILT FENCE ALTERNATIVE "A" DETAIL (SP-2A) ADDED
4	DS	4-16-13	STANDARDS COMMITTEE APPROVAL / NOTE CHANGES

ORIG. DATE:	01/01/01
SCALE:	NONE
DESIGNED BY:	WRC
DRAWN BY:	Mapping

WRC WATER RESOURCES COMMISSIONER
Jim Nash

ONE PUBLIC WORKS DRIVE, BLDG 95 WEST
WATERFORD, MICHIGAN
48328-1907

SHEET NO.: 1 of 1



Ordinance Notes:

North Property Line
Required Minimum Screening and Landscaping: Greenbelt E (10' wide) = 1 large deciduous or evergeen tree and 8 shrubs per 30 ln. ft. (148/30= 4.933)
Provided: 5 evergreen trees, 39 shrubs and 7'10" greenbelt

Note: A 10' wide greenbelt is not feasable due to the physical site layout and conditions.

East Property Line
Required Minimum Screening and Landscaping: Land Form Buffer, Buffer Strip & Obscuring Fence, or Screen Wall.
Provided: 9 deciduous trees, 3 evergreen trees and 90 shrubs

Note: A Land Form Buffer, Buffer Strip & Obscuring Fence or Screen Wall is not feasable due to the physical site layout and conditions. Instead we are proposing a Greenbelt E: 1 large deciduous or evergeen tree and 8 shrubs per 30 ln. ft. (338/30= 11.266)

West Property Line
Required Minimum Screening and Landscaping: Greenbelt E (20' wide) = 1 large deciduous or evergeen tree and 8 shrubs per 30 ln. ft. (331/30= 11.033)
Provided: 10 deciduous trees, 80 shrubs and 9'5" green belt.

Note: A 20' wide greenbelt is not feasable due to the physical site layout and conditions.

South Property Line
Required Minimum Screening and Landscaping: Greenbelt E (20' wide) = 1 large deciduous or evergeen tree and 8 shrubs per 30 ln. ft. (138/30= 4.6)
Provided: 5 deciduous trees, 37 shrubs and 3'6"' greenbelt.

Parking Lot Landscaping

Parking lots containing 10 or more parking spaces shall provide 20 sq. ft. of landscping per parking space. (37 spaces x 20 = 740 sq. ft.) 1 tree and 3 shrubs per 100 sq. ft. shall be provided.
Provided: 7 trees, 29 shrubs and 740 sq. ft. of landscaping.

Interior Landscape Requirements

Required: All interior landscaping shall provide 1 large deciduous tree, small ornamental tree, or evergreen tree and 5 shrubs for every 500 sq. ft. of required interior landscaping area. (46,549 sq. ft. x 15% = 6981 sq. ft.)

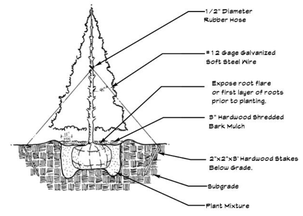
Due to the non exclusive utility and access easements, overhead power lines, electrical panels and sanitary lift station the site does not allow space for the interior landscaping per ordinance. However, the landscape plan does provide 15,716 sq. ft. of landscaping, 39 Trees and 291 Shrubs through careful coordinantion of parking lot landscaping, peripheral landscaping and building landscaping.

Irrigation Requirements

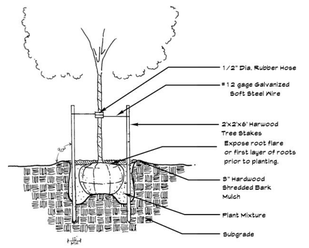
All lawn and shrub bed areas in excess of 200 sq. ft. shall be watered by an automatic irrigation system to assist in maintaining a healthy condition for all landscape plantings and lawn areas. The irrigation system shall be designed and installed by the Landscape Contractor and include a rain sensor. Shrub areas shall be irrigated with drip irrigation.

Plant List

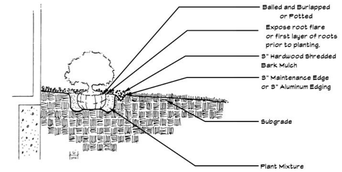
Quantity	Common Name	Latin Name	Planted Size	Section
6	Redpointe Maple	Acer rubrum 'Frank Jr.'	2 1/2" cal.	5.19 D & G
9	Ginkgo Tree	Ginkgo biloba	2 1/2" cal.	5.19 D & G
7	Boulevard American Linden	Tilia americana 'Boulevard'	2 1/2" cal.	5.19 D
9	Armstrong Gold Maple	Acer rubrum 'Armstrong Gold'	2 1/2" cal.	5.19 D
8	Serbian Spruce	Picea omorika	7' Ht.	5.19 D
76	Little Devil Ninebark	Physocarpus opulifolius "Little Devil"	30" ht.	5.19 D & N
75	Little Henry Itea	Itea virginica 'Sprich'	30" ht.	5.19 D
60	Hick's Yew	Taxus 'Hicksii	30" ht.	5.19 D
37	Spilled Wine Weigela	Weigela florida 'Bokraspiwi'	30" spd.	5.19 D & G
36	Yellow Carpet Rose	Rosa 'Yellow Flower Carpet'	30" spd.	5.19 G
7	Gem Box Inkberry Holly	Ilex glabra 'Gem Box'	30" ht.	5.19 G
23	Blue Point Juniper	Juniperus chinensis 'Blue Point'	4' ht.	



Evergreen Planting Detail- 5' and Taller



Deciduous Trees 3" Caliper and Smaller



Shrub Planting Detail

North

Landscape Plan (scale: 1"=20')

0 10' 20' 30' 40'

811 Know what's below. Call before you dig.

Notes:

1. All landscaping shall be installed by a qualified Landscape Contractor. Plant sizes specified on the landscape plan shall be the size planted. Plants smaller then specified will be rejected. Substitutions of any kind must be approved by the Landscape Architect.
2. All plantings shall be mulched with 3" double shredded premium hardwood bark mulch. Trees in lawn areas shall receive a 6' diameter bark ring 3" deep..
3. The landscape contractor shall remove any twine that is wrapped around the trunk of a tree or shrub as well as the top third of any burlap. Remove excess soil on the top of the root ball to expose the root flare or first layer of roots prior to planting. Use a wire cutter to make 3-5 cuts in the wire basket to allow roots to grow through.
4. When planting trees in the lawn area or on the berm the existing soil within a 10 foot diameter shall be loosened by tilling or similar and amended with composted manure or peat at a depth of 6-12".
5. Planting areas shall be edged with a mechanical bed edger to define a border for the shedded bark mulch unless noted otherwise.
6. Parking Islands shall be back filled with at least 12" of topsoil. Amend the topsoil with composted manure and mix into the topsoil at a depth of 6-12". Any aggregate or stone from the construction of the parking lot shall be removed prior to backfill.
7. Lawn areas shall recieve at least 4" of topsoil and sod. Check with specifications for topsoil availability or contact project manager. Topsoil for lawns shall be appropriate for growing and sustaining a healthy lawn.
8. All lawn and shrub bed areas in excess of 200 sq. ft. shall be watered by an automatic irrigation system. The irrigation system shall be designed and installed by the Landscape Contractor and include a rain sensor. Shrub areas shall be irrigated with drip irrigation.
9. Maintenance of the landscape shall be provided for by the owner and include fertilizing of lawn and plant material, yearly pruning, top dressing of mulch areas every other year and provide 1" of water per week during the growing season.
10. All required plantings shall be guaranteed for a period of 2 years and those which are diseased or dead must be replaced in conformance with the approved landscape plan.
11. Plant materials shall be chosen and installed in accordance with standards recommended by the County Cooperative Extension Service or American Nursery Association.

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DESIGN SCAPES
Residential and Commercial Landscape Design
7351 45th Avenue Jenison, Michigan 49428
616.457.0304

STATE OF MICHIGAN
JOYCE E. WEISE
LANDSCAPE ARCHITECT
No. 1202
LICENSED LANDSCAPE ARCHITECT

Landscape Plan Drawn By:
Joyce E. Weise PLA, ASLA

PROPOSED LANDSCAPE PLAN FOR:

Taco Bell Restaurant

Parcel ID#: 12-20-276-036 Highland Road
White Lake Twp., Michigan

AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS

PROJECT NUMBER: 010822

DRAWN BY: Joyce E. Weise PLA, ASLA

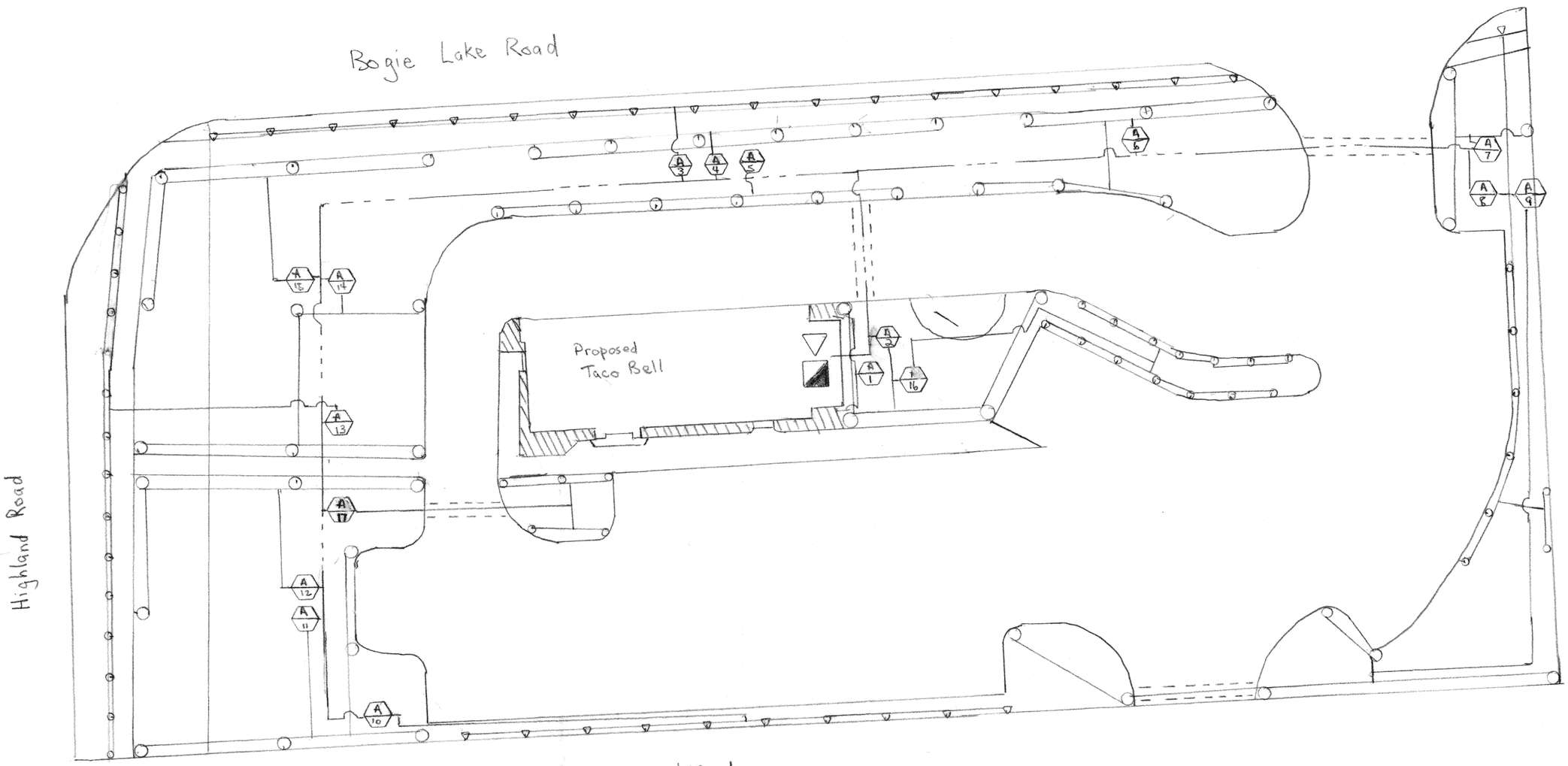
DRAWING DATE: 012822

ISSUED FOR:

02/01/22	Site Plan Approval
05/01/22	Final Site Plan Approval
05/20/22	Review

SCALE 1"=20'

SHEET NUMBER L- 1



Legand

- 1" Tap w/Febco Vacuum Breaker
- Rainbird Controller w/rain sensor
- Valve number w/program
- Rainbird 5000 rotor
- Rainbird 1800 spray
- Rainbird 1800 spray w/SST Nozzle
- Drip irrigation
- 1.25" mainline
- 1" poly feed line
- 3" PVC, sleeve

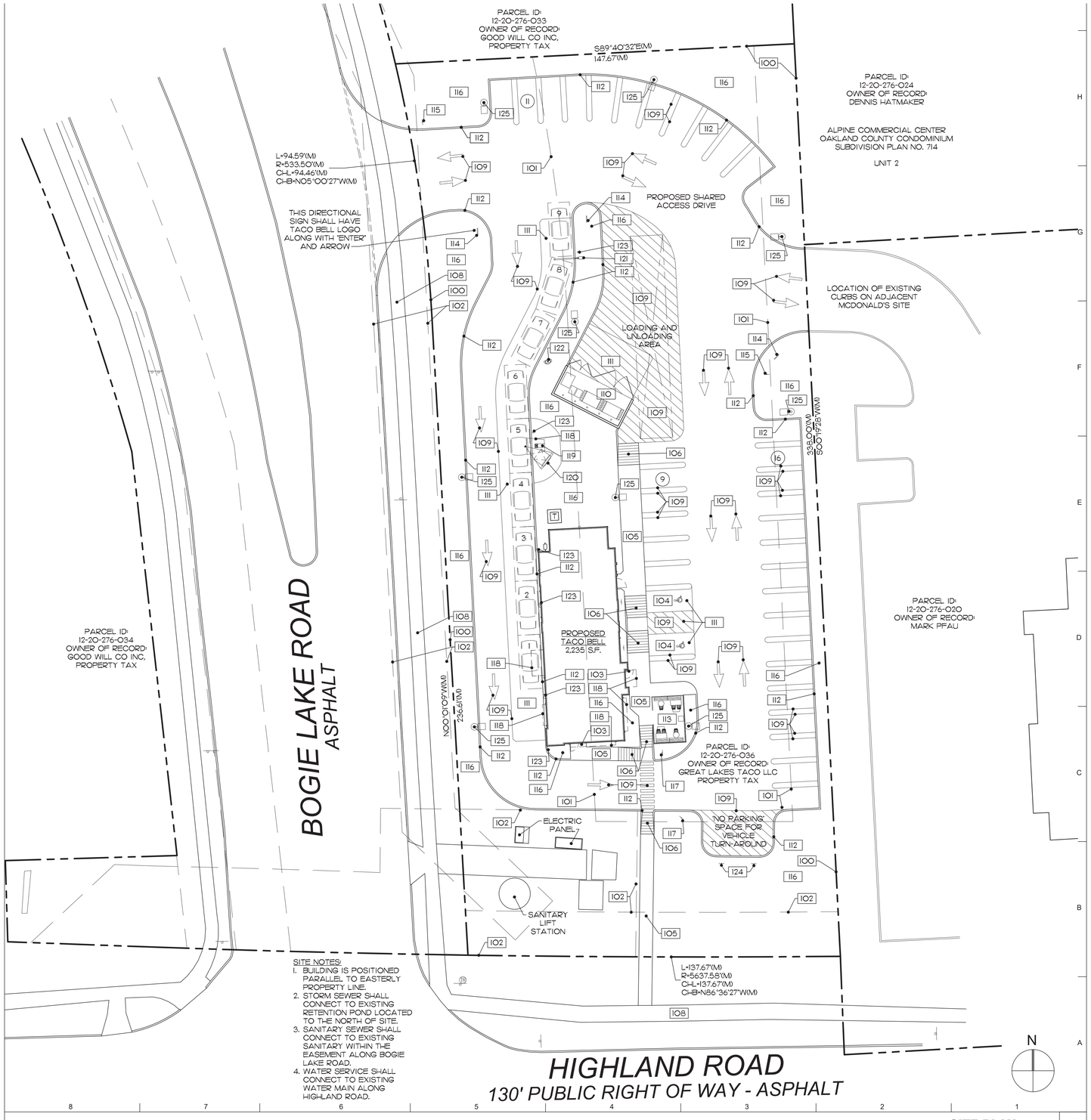
→ N

Irrigation Plan

SCALE: 1" = 20'	APPROVED BY:	DRAWN BY
DATE:		REVISED

Taco Bell, White Lake

DRAWING NUMBER



SITE PLAN 1"=20'-0" **1**

SITE SIGN INFORMATION PER SPA REVIEW COMMENTS

1.	DIRECTIONAL SITE SIGN AREA (3 PROPOSED):	4 S.F.
	DIRECTIONAL SITE SIGN HEIGHT:	5 FEET
2.	DIGITAL MENU BOARD AREA (1 PROPOSED):	25 S.F.
	DIGITAL MENU BOARD HEIGHT:	6 FEET 2 INCHES
3.	DIGITAL PRE-SELL BOARD AREA (1 PROPOSED):	13.75 S.F.
	DIGITAL PRE-SELL BOARD HEIGHT:	6 FEET 2 INCHES

SIGNAGE NOTE

ALL BUILDING AND SITE SIGNAGE PERMITS SHALL BE APPLIED FOR BY SIGN VENDOR.

SITE INFORMATION & STANDARDS

SITE IS ZONED 'PB' PLANNED BUSINESS
SITE: +/- 46,580 SF (1.069 ACRES)
BUILDING: 2,235 SF
LOT COVERAGE: 4.80% (2,235 SF / 46,580 SF)
LANDSCAPE REQUIRED: 6,987 SF (15%)
LANDSCAPE PROVIDED: 12,830 SF (27.5%)
OUTDOOR SEATING AREA: 210 SF
INTERIOR SEAT COUNT: 36
EXTERIOR SEAT COUNT: 12
DRIVE-THRU STACK REQUIRED: 8
DRIVE-THRU STACK PROVIDED: 9
PARKING SPACES REQUIRED: 30
PARKING SPACES PROVIDED: 36
LOADING SPACE REQUIRED: NONE
LOADING SPACE PROVIDED: 12'x75'

100. PROPERTY LINE
101. LINE OF REQUIRED YARD SETBACK
102. LINE OF SANITARY SEWER AND ROAD EASEMENTS
103. ACCESSIBLE ENTRY SIGNAGE
104. ACCESSIBLE PARKING STALL WITH ACCESSIBLE AISLE AND SIGNAGE - 2% MAX. SLOPE IN ANY DIRECTION
105. ACCESSIBLE CONC. SIDEWALK - 5% MAX. SLOPE, 2% MAX. CROSS SLOPE
106. ACCESSIBLE CURB RAMP - 8.3% MAX. SLOPE, 2% MAX. CROSS SLOPE
107. ACCESSIBLE CROSSWALK - 5% MAX. SLOPE, 2% MAX. CROSS SLOPE
108. EXISTING PUBLIC SIDEWALK
109. PAINTED PARKING STRIPING AND DIRECTIONAL ARROWS
110. TRASH ENCLOSURE - 6' HEIGHT - THIN-BRICK VENEER ON CMU WITH HDPE LUMBER GATES - REFER TO SHEET G2.0 FOR MORE INFORMATION
111. CONCRETE PAVEMENT
112. CONCRETE CURB AND GUTTER - 6" MAXIMUM HEIGHT
113. OUTDOOR DINING PATIO WITH 42" HIGH ANODIZED ALUMINUM GUARDRAIL - 2.0% MAXIMUM SLOPE IN ANY DIRECTION
114. DIRECTIONAL SIGNAGE - V-03 - 4 S.F. - 5' HEIGHT
115. STOP SIGN AND POST
116. LANDSCAPE AND IRRIGATION AREA
117. 'DO NOT ENTER' TRAFFIC SIGN AND POST
118. BUILDING CANOPY
119. SPEAKER POST AND CANOPY
120. DIGITAL MENU BOARD - V12-2 - 25 S.F. - 6'-2" HEIGHT
121. CLEARANCE BAR
122. DIGITAL PRE-SELL BOARD - V12-1 - 13.75 S.F. - 6'-2" HEIGHT
123. 6" DIA. CONC. FILLED PIPE BOLLARD - PAINTED SAFETY YELLOW
124. 'NO PARKING' SIGN AND POST
125. POLE-MOUNTED SITE LIGHT FIXTURE - REFER TO PHOT0METRIC SITE PLAN

KEY NOTES N.T.S. **A**

STATE OF MICHIGAN
GREGORY SCOT LAUTZENHEISER
ARCHITECT NO. 1301031102
LICENSED ARCHITECT

L+A
ARCHITECTS INC. A.I.A
441 S. LIVERNOIS ROAD
SUITE 265
ROCHESTER HILLS, MI 48307
PHONE (248) 524-4700
FAX (248) 524-9746

PROJECT # 20023

	DATE	REMARKS
	2/1/2022	Site Plan Approval
	4/13/2022	Site Plan Approval
	5/11/2022	Site Plan Approval

CONTRACT DATE:
BUILDING TYPE: END. MED40
PLAN VERSION: MARCH 2020
BRAND DESIGNER:
SITE NUMBER:
STORE NUMBER:
PA/PM:
DRAWN BY.:
JOB NO.:

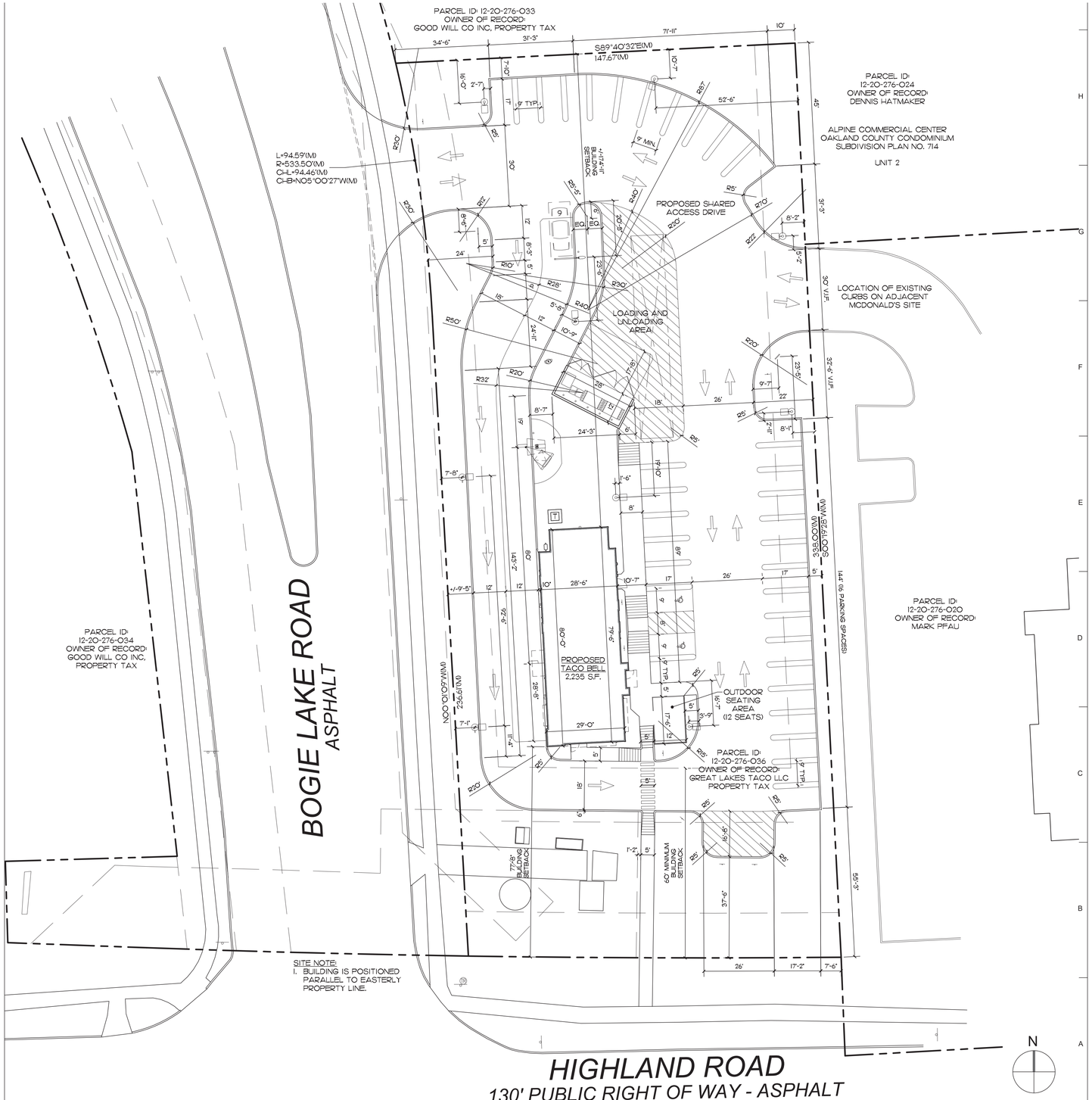
GREAT LAKES TACO, L.L.C.
6305 Highland Road (M-59)
White Lake Twp., Michigan 48383

TACO BELL

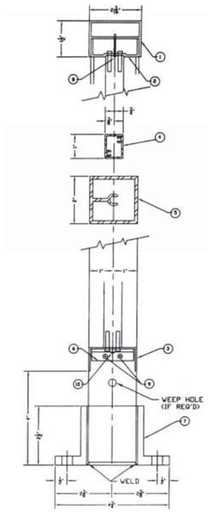
ENDEAVOR 2.0
SITE PLAN

A0.5

PLOT DATE: 5/11/2022



SITE PLAN 1"=20'-0" | **1**

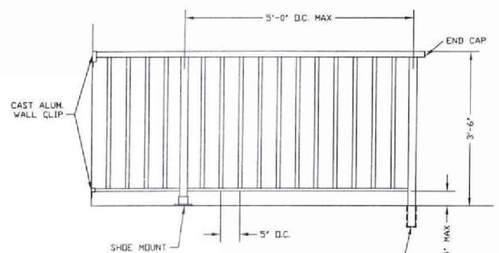


ARS P2066AA ALUMINUM PICKET RAILING

ITEM NO.	PART NO.	DESCRIPTION	MATERIAL
1	ARS66AA	TOP RAIL 2 3/16" x 1 1/2" H.	6063-T6
2	ARS67	CHANNEL 3/4" x 1.98" x 3/4"	6063-T6
3	ARS68A	CHANNEL 1" x 2" x 1" x .085" WALL	6063-T6
4	ARS60	PICKET 3/4" x 1" RECT.	6063-T6
5	ARS12P	POST 2" SQ.	6005-T6
6	PC1	ANGLE CLIP 1 1/4" x 1/2" x 1/8" x 1 1/4" W	6063-T6
7	ARS238	POST SHOE 2 1/2" H x 4 3/4" SQ.	ALUM. CASTING
8	AD-61635	POP RIVET B.S.	ALUM.
9		S.S. SELF TAPPING SCREW	S.S.
10	AD-64BS	POP RIVET B.S.	ALUM.

ARS59 3/4" SQ. · ARS61 3/4" x 1 1/2" · ARS63 1"Ø · ARS69 1" SQ.

AVAILABLE PICKETS



NOTE: SIDE MOUNT IS AVAILABLE
PICKETS AVAILABLE IN 4", 5" AND 6" O.C. SPACINGS.

AMERICAN RAILING SYSTEMS, INC. 1813 McCLELLAND AVE, ERIE, PA 16510 PHONE: (814) 899-7677 WEBSITE:WWW.AMERICANRAILING.COM FAX: (814) 899-0743 EMAIL: ARS@AMERICANRAILING.COM	CUSTOMER:
STYLE: P2066AA ALUM. PICKET RAIL WITH ARS60 PICKETS	JOB NAME:
	DATE:
FINISHES AVAIL: BAKED ENAMEL, KYNAR, ANODIZED, DURANODIC & POWDER COAT	DRN. BY: JOB #

PATIO RAIL INFORMATION N.T.S. | **B**

STATE OF MICHIGAN
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JOB NO.:

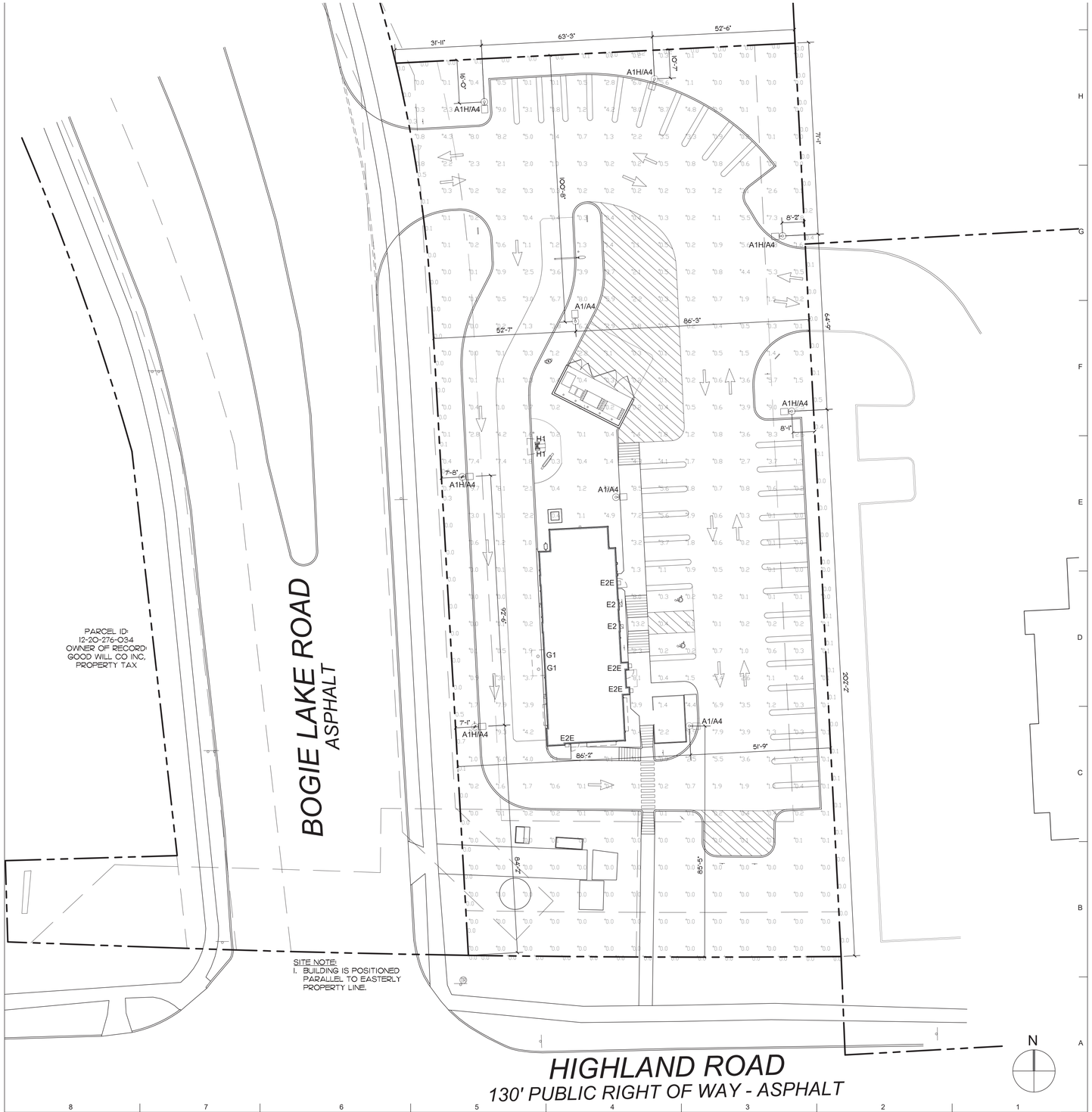
GREAT LAKES
TACO, L.L.C.
6305 Highland Road (M-59)
White Lake Twp., Michigan 48383

TACO BELL

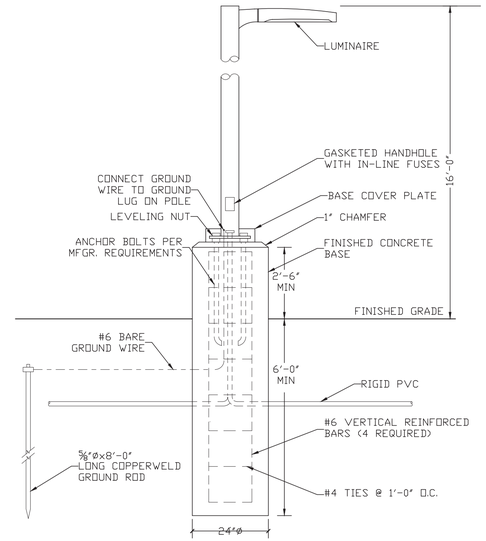
ENDEAVOR 2.0
DIMENSIONAL SITE PLAN

A0.6

PLOT DATE: 5/11/2022



SITE PLAN 1"=20'-0" | **1**



CONCRETE BASE DETAIL (A1 & A1H)

NO SCALE

Fixture Schedule

Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Lumens Per Lamp	LLF	Wattage
	A1/A4	3	LSI INDUSTRIES, INC.	MRM-LED-09L-SIL-FT-40-70CRI FIXTURE, 4SQB3-A125-13'-6"-BRZ POLE	LED POLE MOUNTED FIXTURE, FORWARD THROW, UNV VOLTAGE, 0-10V DIMMING, 4000CCT, 70CRI, MOUNTED TO 13'-6" ALUMINUM POLE AND 2'-6" CONCRETE BASE. TOP OF THE MOUNTED LIGHT FIXTURE AND POLE AT 16'-0"AFG.	LED, 62W, 4000K	1	9860	0.85	62
	A1H/A4	6	LSI INDUSTRIES, INC.	MRM-LED-09L-SIL-FT-40-70CRI-IH FIXTURE, 4SQB3-A125-13'-6"-BRZ POLE	LED POLE MOUNTED FIXTURE WITH HOUSE SIDE SHIELD, FORWARD THROW, UNV VOLTAGE, 0-10V DIMMING, 4000CCT, 70CRI, MOUNTED TO 13'-6" ALUMINUM POLE AND 2'-6" CONCRETE BASE. TOP OF THE MOUNTED LIGHT FIXTURE AND POLE IS AT 16'-0"AFG.	LED, 62W, 4000K	1	7081	0.85	62
	E2	2	LITHONIA LIGHTING	WDGE1 LED P1 40K 80CRI VF MVOLT DWG DDBXD	WDGE1 LED WITH P1 - PERFORMANCE PACKAGE, 4000K, 80CRI, VISUAL COMFORT FORWARD OPTIC. TOP OF MOUNTED FIXTURE IS AT 12'-0"AFG. (SECURITY LIGHTING FOR ADJACENT WALKWAY)	LED, 10W, 4000K	1	1227	0.9	10.0002
	E2E	4	LITHONIA LIGHTING	WDGE1 LED P1 40K 80CRI VF MVOLT E4WH DWG DDBD MVOLT E4WH DWG DDBD	WDGE1 LED WITH P1 - PERFORMANCE PACKAGE, 4000K, 80CRI, VISUAL COMFORT FORWARD OPTIC. TOP OF MOUNTED FIXTURE IS AT 9'-1"AFG.	LED, 10W, 4000K	1	1227	0.9	10.0002
	G1	2	LIGHTOLIER	FD6R4CCT	6" DIAMETER RECESSED LED FLAT DOWN LIGHT, DIFFUSED LENS, WET LISTED, FIXTURE RECESSED MOUNTED AT 9'-0"AFG	LED, 13W, 4000K	1	900	0.9	13
	H1	2	WESTGATE MFG	LFX-XS-15W-40K-KN-BRZ	LED 90 DEGREE ADJUSTABLE FLOOD LIGHT, FIXTURE MOUNTED AT 7'-3"AFG.	LED, 15W, 4000K	1	1863	0.9	14.76

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
WEST DRIVEWAY	+	1.8 fc	9.7 fc	0.0 fc	N/A	N/A
BUILDING	+	2.8 fc	32.6 fc	0.0 fc	N/A	N/A
EAST DRIVEWAY	+	1.7 fc	8.4 fc	0.1 fc	84.0:1	17.0:1
EAST PARKING LOT	+	1.6 fc	8.8 fc	0.0 fc	N/A	N/A
NORTH PARKING LOT	+	2.0 fc	9.9 fc	0.2 fc	49.5:1	10.0:1
PROPERTY LINE	+	0.1 fc	0.7 fc	0.0 fc	N/A	N/A
SITE	+	1.4 fc	13.2 fc	0.0 fc	N/A	N/A

Luminaire Locations

		Location						Aim		
No.	Label	X	Y	Z	MH	Orientation	Tilt	X	Y	Z
11	A1/A4	240.34	1.57	15.70	15.70	176.74	0.00	240.41	0.40	0.00
12	A1/A4	324.92	28.43	15.70	15.70	176.74	0.00	324.98	27.26	0.00
13	A1/A4	390.17	43.20	15.70	15.70	86.97	0.00	391.35	43.26	0.00
1	A1H/A4	470.96	77.21	15.70	15.70	267.71	0.00	469.78	77.17	0.00
2	A1H/A4	421.42	-32.93	15.70	15.70	357.11	0.00	421.37	-31.76	0.00
3	A1H/A4	356.66	-36.28	15.70	15.70	357.11	0.00	356.60	-35.10	0.00
5	A1H/A4	240.00	80.66	15.70	15.70	176.74	0.00	240.07	79.49	0.00
8	A1H/A4	479.44	14.41	15.70	15.70	285.11	0.00	478.31	14.72	0.00
9	A1H/A4	332.38	85.31	15.70	15.70	176.74	0.00	332.45	84.14	0.00
1	E2E	233.74	46.68	8.50	8.50	267.12	0.00	233.61	46.68	0.00
2	E2E	293.18	28.03	8.50	8.50	177.14	0.00	293.18	27.90	0.00
3	E2E	253.26	23.47	8.50	8.50	177.14	0.00	253.27	23.34	0.00
4	E2E	262.54	23.94	8.50	8.50	177.14	0.00	262.55	23.80	0.00
6	E2	285.08	27.47	11.40	11.40	176.78	0.00	285.08	27.34	0.00
7	E2	277.04	27.06	11.40	11.40	176.78	0.00	277.05	26.93	0.00
1	G1	261.76	57.17	9.00	9.00	359.80	0.00	261.76	57.17	0.00
2	G1	265.95	57.42	9.00	9.00	359.80	0.00	265.95	57.42	0.00
1	H1	342.29	57.70	7.30	7.30	267.45	157.61	341.56	57.66	10.40
2	H1	345.69	57.85	7.30	7.30	86.99	156.83	346.48	57.89	10.40

NOTE:

1. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT 6'-0" ABOVE FINISH GRADE TO FACE OF FIXTURE. REFER TO LUMINAIRE LOCATIONS SCHEDULE FOR FIXTURE FACE MOUNTING HEIGHT.
2. SEE FIXTURE SCHEDULE FOR OVERALL MOUNTING HEIGHT OF FIXTURES.
3. SEE FIXTURE SCHEDULE FOR LIGHT LOSS FACTOR.

THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERNG SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINARE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.

SITE LIGHTING NOTES N.T.S. | **A**

STATE OF MICHIGAN
GREGORY SCOTT LAUTZENHEISER
ARCHITECT
NO. 1301031102
LICENSED ARCHITECT

L+A ARCHITECTS INC. A.I.A
441 S. LIVERNOIS ROAD
SUITE 265
ROCHESTER HILLS, MI 48307
PHONE (248) 524-4700
FAX (248) 524-9746

PROJECT # 20023

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	5/11/2022	Site Plan Approval

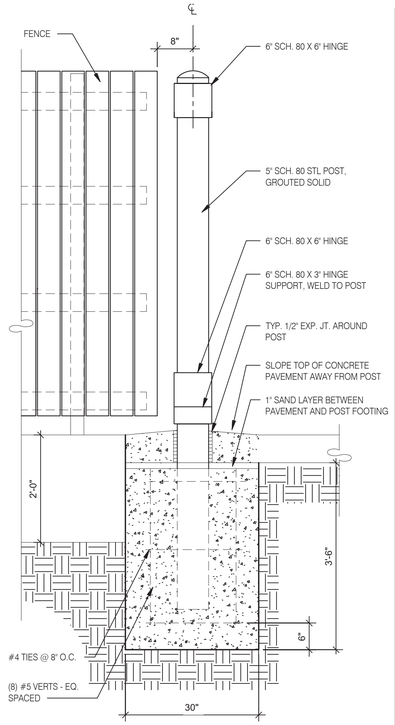
CONTRACT DATE:
BUILDING TYPE: END. MED40
PLAN VERSION: MARCH 2020
BRAND DESIGNER:
SITE NUMBER:
STORE NUMBER:
PA/PM:
DRAWN BY.:
JOB NO.:

GREAT LAKES TACO, L.L.C.
6305 Highland Road (M-59)
White Lake Twp., Michigan 48383

ENDEAVOR 2.0
PHOTOMETRIC SITE PLAN

A0.7

PLOT DATE: 5/11/2022



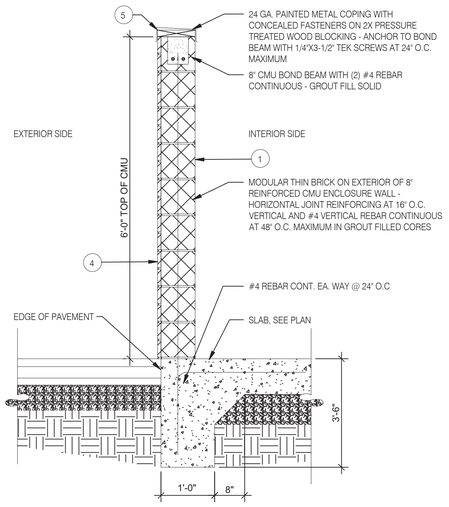
GATE POST FOOTING 3/4" = 1'-0" H

GATE HARDWARE: ALL HARDWARE AND ACCESSORIES SHALL BE HEAVY GALVANIZED.

GATE STOP: MUSHROOM TYPE OR FLUSH PLATE WITH ANCHORS SET IN CONCRETE TO ENGAGE THE CENTER DROP ROD OR PLUNGER BAR.

GATE NOTES: (4) EQUAL WIDE x 6-0" HIGH MTL. GATES, TYPE 'B' 1 1/2" DECKING, 22GA. W/ T.S. 1 X1 1875 BAR CROSS BRACING WELD AND GRIND SMOOTH ALL CONNECTIONS, TYP. PRIME AND PAINT ALL STEEL COMPONENTS.

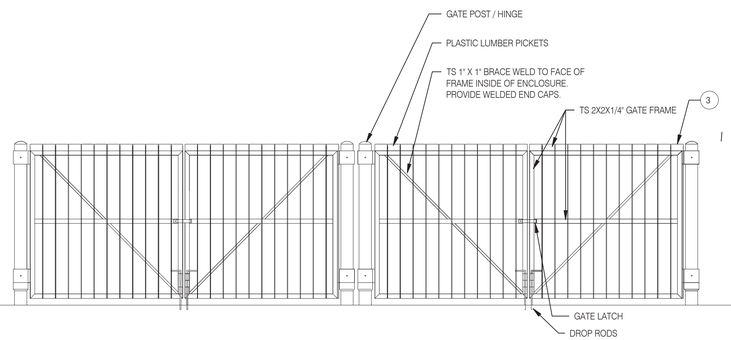
ENCLOSURE NOTES N.T.S. G



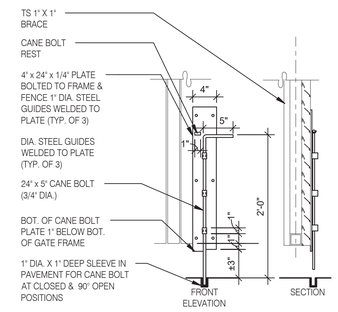
FENCE SECTION 3/4" = 1'-0" F

SYMBOL	AREA	MANUFACTURER	COLOR
1	GATE FRAME AND EXPOSED CMU COLOR	SHERWIN WILLIAMS	SW 7055 ENDURING BRONZE
2	PIPE BOLLARDS	SHERWIN WILLIAMS	CAUTION YELLOW
3	HDPE LUMBER	MAX. R	LIGHT BROWN TEXTURE
4	3 9/16" X 7 5/8" MODULAR THIN BRICK	INTERSTATE BRICK COMPANY	70% PEWTER / 30% PLATINUM RANDOM MIX INSTALL
5	PAINTED METAL COPING		CYBERSPACE (SW7076) KYNAR 500 COATING

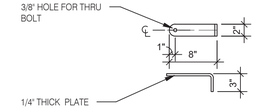
SCHEDULE N.T.S. E



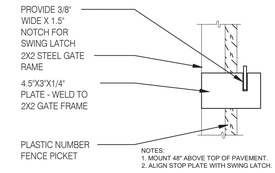
FRONT ELEVATION N.T.S. D



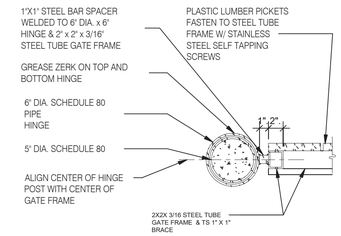
C5 CANE BOLT (1 PER GATE)



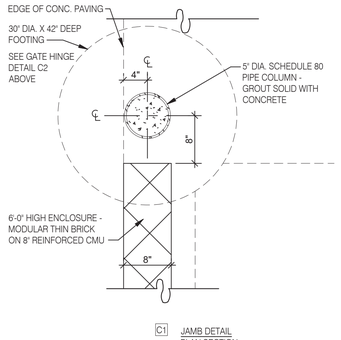
C4 GATE HANDLE



C3 STOP PLATE SECTION

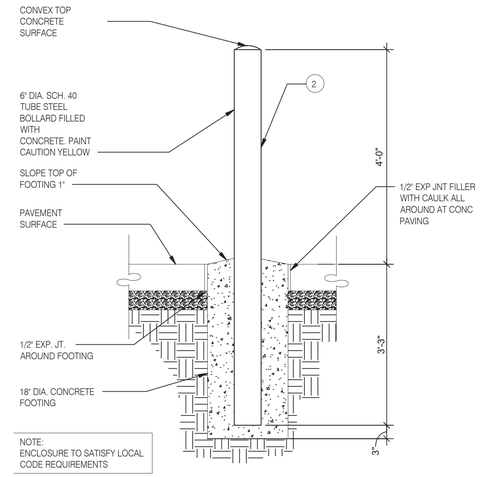


C2 GATE HINGE DETAIL PLAN SECTION



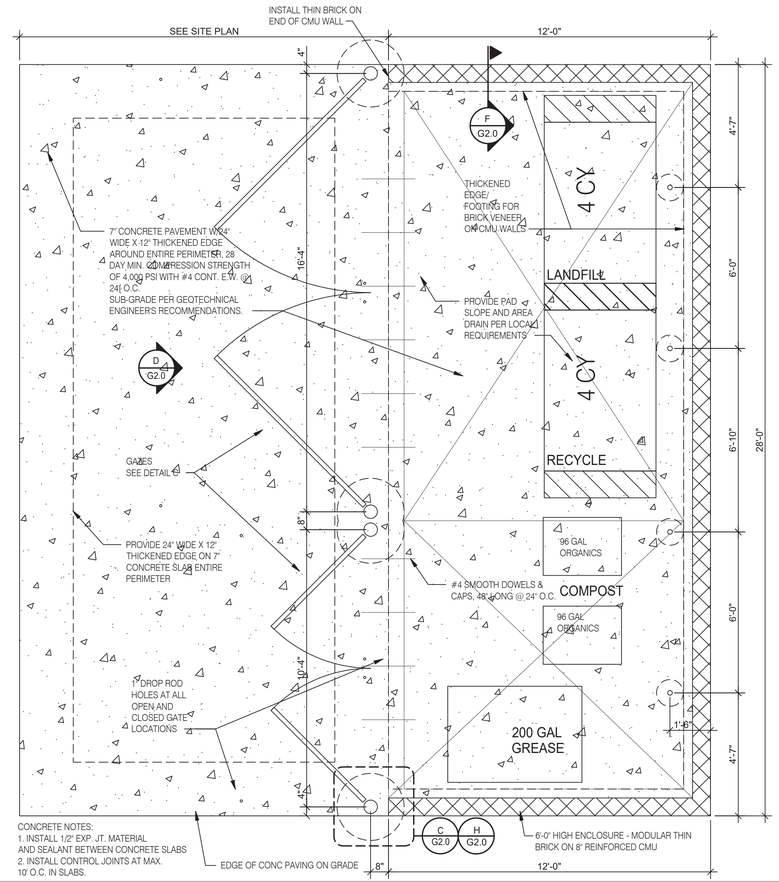
C1 JAMB DETAIL PLAN SECTION

GATE DETAILS N.T.S. C



1 GUARDPOST BOLLARD DETAIL

TRASH ENCLOSURE BOLLARD DETAILS 3/4" = 1'-0" B



TRASH LAYOUT 3/8" = 1'-0" A

STATE OF MICHIGAN
GREGORY SCOT LAUTZENHEISER
ARCHITECT
NO. 1301031102
LICENSED ARCHITECT

L+A ARCHITECTS INC. A.I.A
441 S. LIVERNOIS ROAD
SUITE 265
ROCHESTER HILLS, MI 48307
PHONE (248) 524-4700
FAX (248) 524-9746

PROJECT # 20023

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	2/1/2022	Site Plan Approval
	4/13/2022	Site Plan Approval
	5/11/2022	Site Plan Approval

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6305 Highland Road (M-59)
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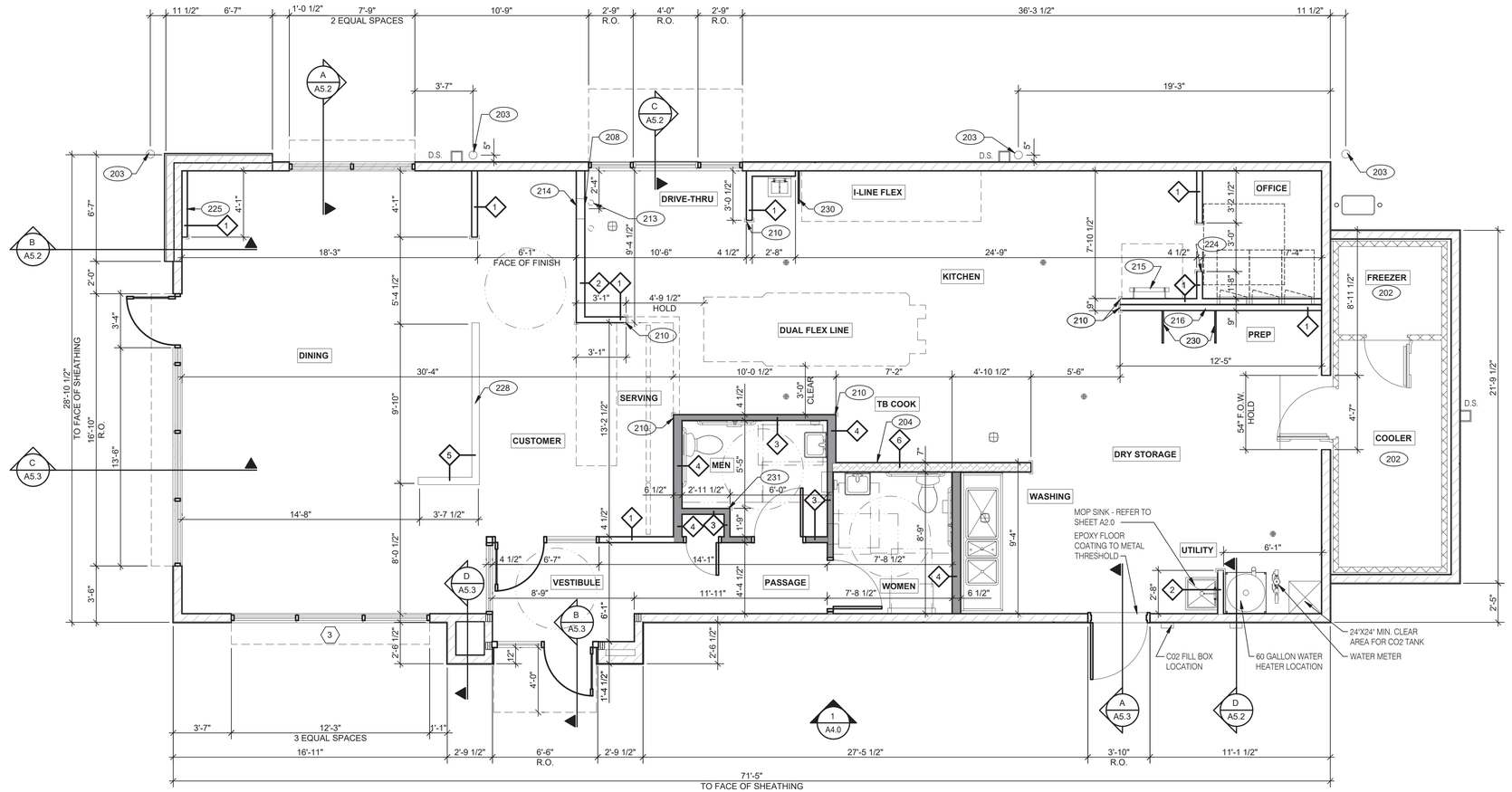
TACO BELL

ENDEAVOR 2.0

TRASH ENCLOSURE DETAILS

G2.0

PLOT DATE: 5/11/2022



12 11 10 9 8 7 6 5 4 3 2 1

FLOOR PLAN 1/4" = 1'-0" 1

WALL LEGEND

TYPICAL EXTERIOR WALL:
2X6 WD STUDS AT 16" O.C. W/ SHEATHING AS SCHEDULED (SEE STRUCT. DWGS.) AND R-19 KRAFT-FACED FIBERGLASS BATT INSULATION U.O.N. GC SHALL PROVIDE 2 LAYERS OF GRADE 'D' 60 lb BUILDING PAPER.

TYPICAL INTERIOR WALL:
WD STUDS AT 16" O.C. AS INDICATED

1 2X4 WOOD STUDS

2 2X6 WOOD STUDS

INTERIOR SOUND-RATED WALL:
TYPICAL INTERIOR WALL W/ 3-1/2" UNFACED FIBERGLASS BATT INSULATION.

3 2X4 WOOD STUDS 4 2X6 WOOD STUDS

HOODWALL:
INTERIOR NON-COMBUSTIBLE WALL WITH 20 GA. S.S. PANEL BEHIND HOOD. EXTEND MIN. 18" BEYOND END OF HOOD. METAL STUD FRAMING.

6 6" METAL STUD

DASHED LINE INDICATES INTERIOR SUBSTRATE LOCATION.

LOW WALL:
2X4 WD STUDS AT 16" O.C. AS SCHEDULED

5 2X4 WOOD STUDS

WALL HEIGHTS:
ALL INTERIOR NON-BEARING WALLS GO TO BOTTOM OF TRUSS, U.O.N. REFER TO STRUCTURE.

WALL SUBSTRATES:
- DINING ROOM:
1/2" GYPSUM WALLBOARD FROM FLOOR SLAB TO 6" ABOVE CEILING HEIGHT U.O.N. (NOTE: THE CEMENT BOARD SPECIFICATION IS DESIGNED TO ALLOW THE G.C. FLEXIBILITY.)
- KITCHEN WALLS AND DINING ROOM CLOSET:
1/2" CEMENT WALLBOARD FROM T.O. SLAB T.O. 12" A.F.F. AT 12" A.F.F., USE 1/2" CDX PLYWOOD W/FRP SURFACE FINISH TO 6' ABOVE CEILING HEIGHT U.O.N. IF DOUBLE SIDE SHEAR WALL PLYWD IS SPECIFIED THE PLYWOOD SHALL BE CONTINUOUS FROM SILL PLATE TO TOP PLATE.
- RESTROOM WALLS:
5/8" CEMENT WALLBOARD FROM T.O. SLAB OR T.O. CONCRETE CURB TO 48" A.F.F., WITH 5/8" HI-IMPACT BRAND XP WALLBOARD, TYPE X CORE FROM T.O. CEMENT BOARD TO 6' ABOVE CEILING HEIGHT U.O.N. NO SUBSTITUTIONS ALLOWED. FINISH AS SCHEDULED.
- ALL OTHER FRAME WALL CONDITIONS:
1/2" CEMENT WALLBOARD FROM T.O. SLAB OR T.O. CONCRETE CURB TO 48" A.F.F., WITH 1/2" GYPSUM WALLBOARD FROM T.O. CEMENT BOARD TO 6" ABOVE CEILING HEIGHT U.O.N. FINISH AS SCHEDULE

FLOOR PLAN NOTES

DIMENSIONS:
A. ALL DIMENSIONS NOTED ARE TO FACE OF CONCRETE FOUNDATION, FACE OF SHEATHING ON EXTERIOR WALLS, AND FACE OF FINISH ON INTERIOR WALLS U.N.O.
B. DIMENSIONS NOTED AS "CLEAR" OR "HOLD" ARE MIN. REQUIRED. NET CLEARANCE FROM FACE OF WALL / WAINSCOT FINISH. VERIFY FINAL EQUIPMENT SIZES W/ VENDOR PRIOR TO INT. WALL FRAMING.

WINDOWS / DOORS:
A. STOREFRONT FRAMING SYSTEM SHALL BE DARK BRONZE ANODIZED.
B. ALL DOOR AND WINDOW OPENING DIMENSIONS ARE TO ROUGH OPENING.

FINISH SUBSTRATES:
A. PROVIDE 1/2" THICK CEMENTITOUS BD. FROM FLOOR SLAB TO 12" A.F.F. MIN. IN LIEU OF GYP. BD. AT ALL WALLS EXCEPT SHEARWALL SURFACES, U.O.N.
B. ALL JOINTS, GAPS OR SPACES LEADING TO ALL HOLLOW OR INACCESSIBLE SPACES SHALL BE SEALED WITH "NSF INTERNATIONAL" APPROVED SEALANTS.
C. ALL BACK OF HOUSE AND OFFICE WALLS SHALL HAVE 1/2" CDX PLYWOOD SUBSTRATE, U.O.N.

GENERAL:
A. PROVIDE THREE FIRE EXTINGUISHERS - (2) 10 lb. BC AND (1) 10 lb. ABC - TO COMPLY WITH LOCAL FIRE CODE. LOCATE PER DIRECTION OF FIRE MARSHALL OR LOCAL AUTHORIZING AGENT. FOR ADDITIONAL INFORMATION SEE SHEET A2.0
B. DRAWINGS ARE BASED UPON WOOD FRAMING. UTILIZATION OF METAL STUDS ON NON-BEARING INTERIOR PARTITONS, BULKHEADS AND SOFFITS IS ACCEPTABLE.

KEY NOTES

202 NO FRP BEHIND W-059 WALK-IN COOLER/FREEZER.
203 PIPE BOLLARD.
204 HOOD WALL, SEE WALL LEGEND.
208 KEEP CLEAR FOR UTILITIES & SYRUP LINES.
210 S.S. CORNER GUARD/WALL CAP [TM-2], TYP. ALL CORNERS IN BACK OF HOUSE FROM REAR WALL TO THE KITCHEN SIDE OF THE SERVICE COUNTER.
213 SYRUP LINE CHASE (ABOVE).
214 14"x14" HORIZONTAL OPENING FOR SYRUP TUBES. COORDINATE WALL PENETRATION WITH COUNTER INSTALLER. SEAL CHASE TO COUNTER.
215 ROOF LADDER.
216 ADD SECOND 2X4 WALL ON KITCHEN SIDE.
224 CASED OPENING, NO DOOR.
225 FUR OUT WALL AS INDICATED WITH 2X4 WOOD STUDS AT 16" O.C.
228 LOW WALL, BY G.C. COORDINATE WITH STRUCTURAL DRAWINGS
230 STAINLESS STEEL SPLASH GUARD.
231 CORNER GUARD TILE SCHLUTER.

L+A ARCHITECTS INC. A.I.A
441 S. LIVERNOIS ROAD
SUITE 265
ROCHESTER HILLS, MI 48307
PHONE (248) 524-4700 FAX (248) 524-9746

PROJECT # 20023

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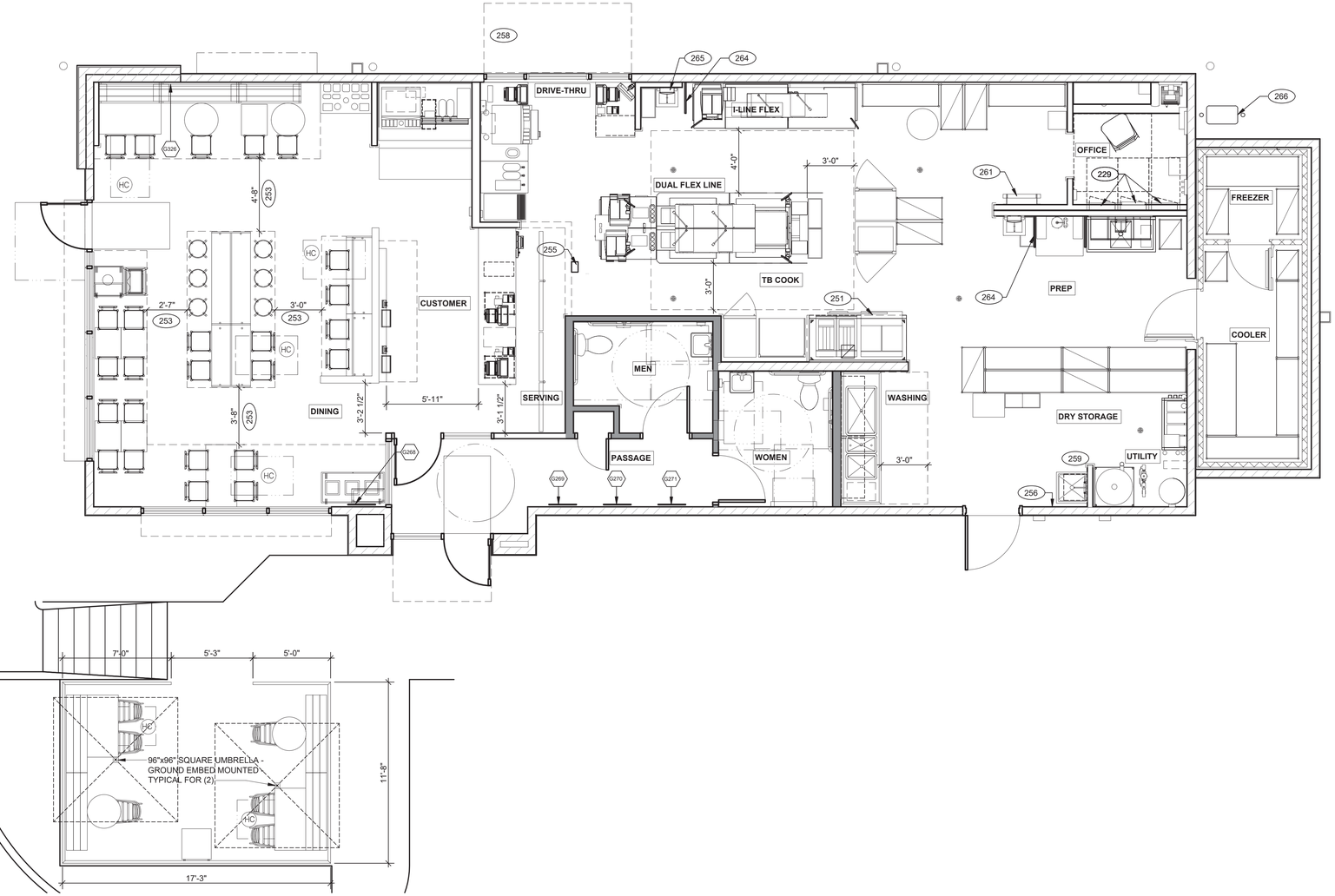
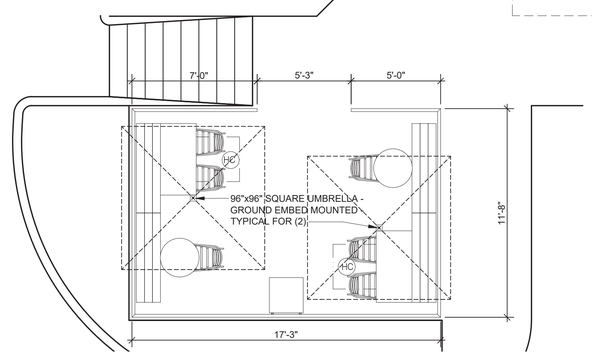
GREAT LAKES TACO, L.L.C.
6305 Highland Road (M-59)
White Lake Twp., Michigan 48383

ENDEAVOR 2.0
FLOOR PLAN

A1.0

PLOT DATE: 5/11/2022





NTD:
OPTIONAL: ROLL-A-SHADE INFINITY SYSTEM
MATERIAL: SHEERWEAVE 2390 5% CHARCOAL
FASCIA SYSTEM: DARK BRONZE

CONTACT - RIC BERG
951.245.5077 EXT. 113
RIC.BERG@ROLLASHADE.COM

N

EQUIPMENT AND SEATING PLAN 1/4" = 1'-0" A

NOT USED E

ARTWORK SCHEDULE D

X	QTY.	NAME	FAMILY	FRAME OR MURAL	SIZE	LOCATION
2326	1	HYPNOTIZE ME BELL	D	M01	H6'-4" x W17'-6"	INTERIOR
2269	1	CAMO PATTERN	D	F01	28x40	INTERIOR
2270	1	CAMO PATTERN	D	F02	28x40	INTERIOR
2271	1	CAMO PATTERN	D	F01	28x40	INTERIOR

DECOR
1. REFER TO SC SHEETS FOR SCOPE OF WORK RESPONSIBILITY
2. (HC) SYMBOL DENOTES A HANDICAP ACCESSIBLE TABLE.

GENERAL NOTES C1

SHELVING QUANTITIES C2

STORAGE TYPE	LINEAR FT.
DRY STORAGE	53
COLD STORAGE	26
FROZEN STORAGE	12

(XXX) KEY NOTES B

229 ELECTRICAL PANELS.
251 HOOD FIRE SUPPRESSION SYSTEM (ANSUL R-102 OR EQUAL).
253 MAINTAIN 36" MIN. CLEAR ACCESSIBLE AISLE EGRESS PATHS TO EXIT DOORS, 32" AT DOORWAYS AND CASED OPENINGS. (42" AISLE REQUIRED WHEN AISLE SERVES MORE THAN 50 SEATS).
255 ALERT LIGHT BOX FOR 3-COMP POWER SOAK.
256 PULL STATION @ 3'-8" A.F.F.
258 COORDINATE LOCATION OF HORIZONTAL PVC SYRUP CHASE THRU WALL TO COUNTER.
261 ROOF LADDER WITH BILCO LADDER UP SAFETY POST.
264 SPLASH GUARD.
265 AUTOMATIC HAND SOAP AND SANITIZER DISPENSERS PROVIDED BY ECOLAB.
266 GAS METER.

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6305 Highland Road (M-59)
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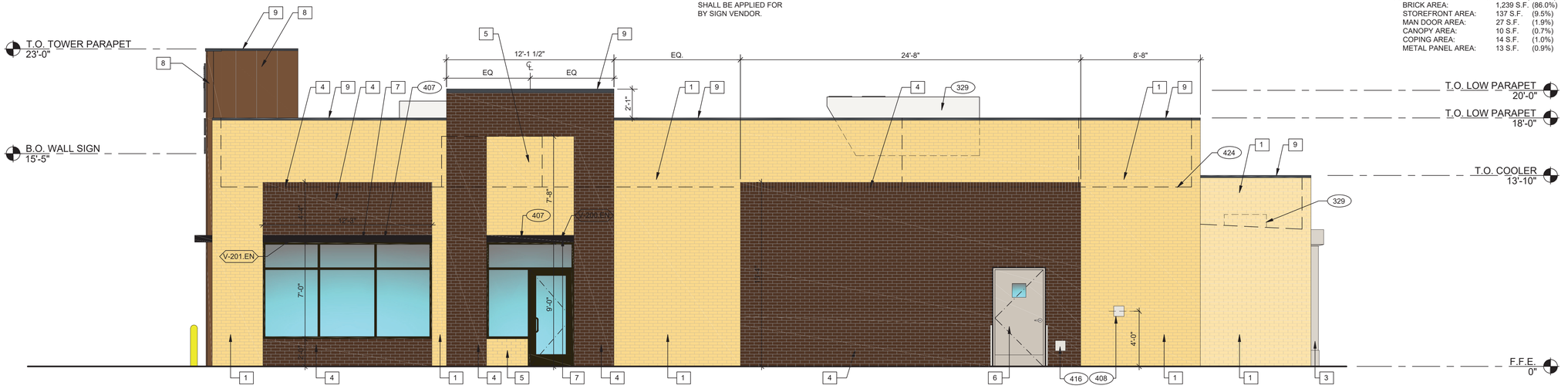
ENDEAVOR 2.0
EQUIPMENT AND SEATING PLAN

A2.0

PLOT DATE: 5/11/2022



SIGNAGE NOTE:
ALL BUILDING AND SITE SIGNAGE PERMITS SHALL BE APPLIED FOR BY SIGN VENDOR.

EAST ELEVATION MATERIAL BREAKDOWN:

TOTAL AREA:	1,440 S.F.	(100.0%)
BRICK AREA:	1,239 S.F.	(86.0%)
STOREFRONT AREA:	137 S.F.	(9.5%)
MAN DOOR AREA:	27 S.F.	(1.9%)
CANOPY AREA:	10 S.F.	(0.7%)
COPING AREA:	14 S.F.	(1.0%)
METAL PANEL AREA:	13 S.F.	(0.9%)

EAST ELEVATION 1/4" = 1'-0" **1**

NOT USED — F

SIGNAGE — E

TYPE MARK	QTY	ITEM DESCRIPTION	LOC
TOWER			
V-09.14W	2	14" WHITE CHANNEL LETTERS VERTICAL	A4.1
V-04.42	2	42" SWINGING BELL PURPLE LOGO FACE LIT	A4.1
SIDE ENTRY			
V-200.EN	1	SIDE ENTRY AWNING 6' 1" L X 4' 0" D BLACK	A4.0
DRIVE THRU			
V-101.DT	1	DT AWNING (OVER DT) 9' 0" L X 4' 0" D BLACK	A4.1
EYEBROW AWNINGS			
V-202.EN	1	FRONT EYEBROW (WINDOW) 16' 7" L X 6" H X 1' 4" D BLACK	A4.1
V-203.EN	1	DT EYEBROW (WINDOW) 7' 8" L X 6" H X 1' 4" D BLACK	A4.1
V-201.EN	1	SIDE ENTRY EYEBROW (WINDOW) 12' L 6" H X 1' 4" D BLACK	A4.0

GENERAL NOTES — C

MISCELLANEOUS
A. STOREFRONT FRAMING SYSTEM SHALL BE DARK BRONZE ANODIZED.

SEALERS (REFER TO SPECS)
A. SEALANT AT ALL WALL AND ROOF PENETRATIONS.
B. SEALANT AT ALL WINDOW AND DOOR FRAMES AND JAMB. DO NOT SEAL SILL @ WINDOWS.
C. APPLY NEOPRENE GASKET (CONT.) BETWEEN BUILDING AND CANOPY.

CRITICAL DIMENSIONS
A. REQUIRED CLEAR OPENING WIDTH TO ENSURE COORDINATION WITH STANDARD SIGNAGE/BUILDING ELEMENTS DIMENSIONS.

NOTE: NO EXTERIOR SIGNS ARE WITHIN THE SCOPE OF WORK COVERED BY THE BUILDING PERMIT APPLICATION. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF ALL EXTERIOR SIGNS AND INSTALLATION OF REQUIRED BLOCKING AND ELECTRICAL CONNECTIONS FOR FINAL APPROVED SIGNS.

PAINT NOTES — A

PAINTING
APPLICATOR MUST DO THEIR DUE DILIGENCE WITH PREPARATION.
PRIMER: 1 COAT SW A24W8300
FINISH: 2 COATS SW A82-100 SERIES, MATCH COLORS FROM MATERIAL SCHEDULE.
A-100 EXTERIOR LATEX SATIN.

EXTERIOR FINISH SCHEDULE — D

SYMBOL	ITEM / MATERIAL	MANUFACTURER	MATERIAL SPEC	COLOR	CONTACT INFORMATION
1	FIELD BRICK VENEER	ENDICOTT BRICK COMPANY	2 1/4" X 7 5/8" MODULAR THIN BRICK SYSTEM	GOLDEN BUFF- WITH STANDARD GRAY MORTAR	
2	SCUPPERS	-	-	WORLDLY GRAY (SW7043), SEMI-GLOSS	
3	DOWN SPOUTS	-	-	WORLDLY GRAY (SW7043), SEMI-GLOSS	
4	ACCENT #1 BRICK VENEER	ENDICOTT BRICK COMPANY	2 1/4" X 7 5/8" MODULAR THIN BRICK SYSTEM	EXECUTIVE IRONSPOT - WITH STANDARD GRAY MORTAR	
5	ACCENT #2 BRICK VENEER	ENDICOTT BRICK COMPANY	2 1/4" X 7 5/8" MODULAR THIN BRICK SYSTEM	GOLDEN BUFF- WITH STANDARD GRAY MORTAR	
6	HOLLOW METAL DOOR	-	-	WORLDLY GRAY (SW7043), SEMI-GLOSS	
7	AWNINGS	SIGNAGE VENDOR	-	BLACK BY THE SIGNAGE VENDOR	
8	CORNER TOWER	WESTERN STATE	T-GROOVE 24 GAUGE PAINTED 18" PANEL	WEATHERED RUSTIC	
9	METAL PARAPET CAP	-	24 GAUGE GALVANIZED	CYBERSPACE (SW7076) KYNAR 500 COATING	

KEY NOTES — B

316 METAL PARAPET CAP.
329 MECHANICAL UNIT.
401 BUILDING SIGN BY VENDOR. REQUIRES ELECTRICAL.
402 DRIVE THRU WINDOW. REFER TO SHEET A1.0.
407 METAL CANOPIES BY VENDOR. REQUIRES ELECTRICAL.
409 ASSUME D/T LANE SURFACE IS 6" BELOW THE FINISH FLOOR. REFER TO GRADING & SITE PLAN.
411 CONCRETE CURB.
424 LINE OF ROOF BEYOND.
501 BUILDING ADDRESS NUMBER - OPAQUE APPLIQUE ON OUTSIDE OF GLAZING WHITE COLOR - ARIAL TYPEFACE 6" HEIGHT.

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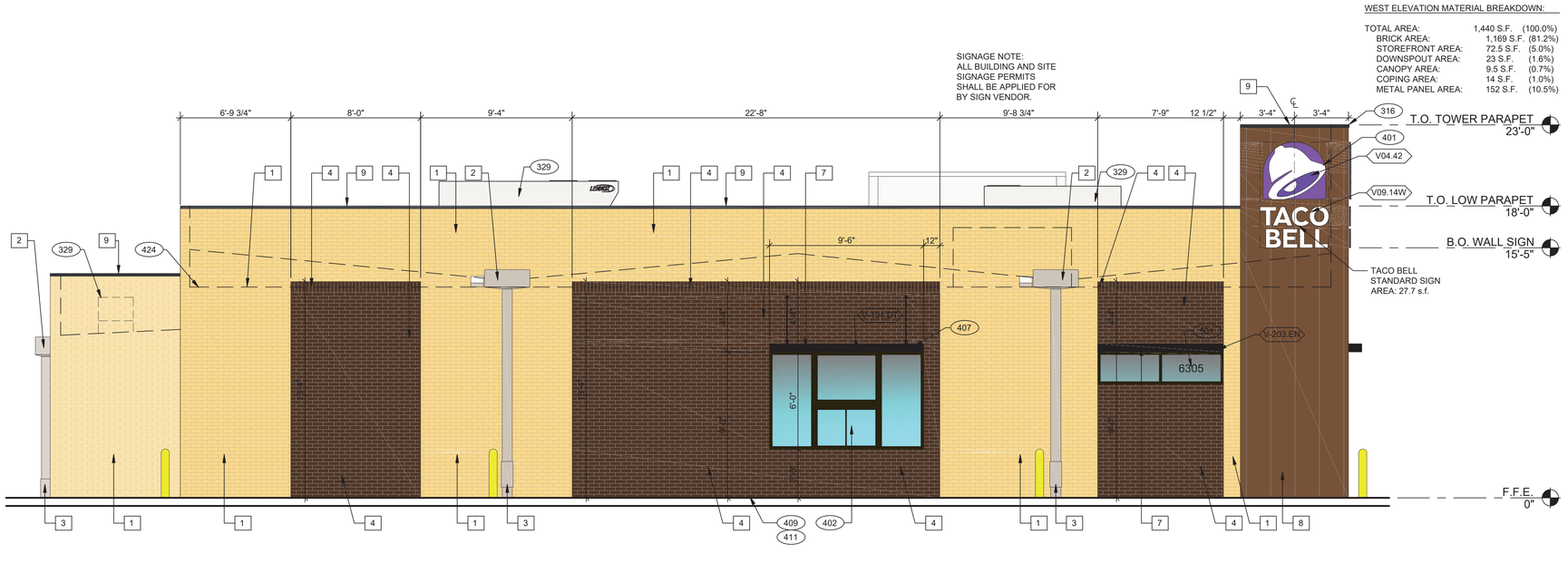
ENDEAVOR 2.0
EXTERIOR ELEVATIONS

A4.0

PLOT DATE: 5/11/2022



WEST ELEVATION MATERIAL BREAKDOWN:

TOTAL AREA:	1,440 S.F.	(100.0%)
BRICK AREA:	1,169 S.F.	(81.2%)
STOREFRONT AREA:	72.5 S.F.	(5.0%)
DOWNSPOUT AREA:	23 S.F.	(1.6%)
CANOPY AREA:	9.5 S.F.	(0.7%)
COPING AREA:	14 S.F.	(1.0%)
METAL PANEL AREA:	152 S.F.	(10.5%)

WEST ELEVATION 1/4" = 1'-0" **1**

ALLOWED EXTERIOR WALL SIGN AREA: 10% OF SOUTH ELEVATION AREA
SOUTH ELEVATION WALL AREA: 556 SQUARE FEET
10% OF SOUTH ELEVATION AREA: 55.6 SQUARE FEET

TOTAL AREA FOR PROPOSED WALL SIGNS: 55.4 SQUARE FEET
PROP. SOUTH ELEVATION WALL SIGN AREA: 27.7 SQUARE FEET
PROP. WEST ELEVATION WALL SIGN AREA: 27.7 SQUARE FEET

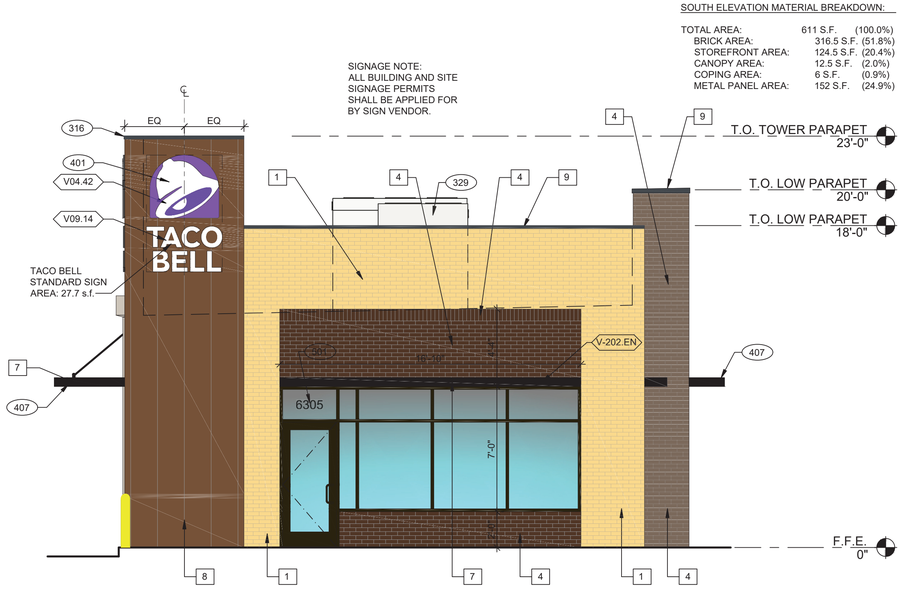
PER THE PLANNING COMMISSIONS PRELIMINARY REVIEW - ONE (1) SIGN SHALL BE ALLOWED ON SOUTH ELEVATION (HIGHLAND ROAD FRONTAGE) AND ONE (1) SHALL BE ALLOWED ON WEST ELEVATION (BOGIE LAKE ROAD FRONTAGE) - WITH BOTH SIGNS BEING OF THE SAME SIZE.

SIGN CALCULATION **B**

REFER TO SHEET A4.0 FOR FINISH SCHEDULE

316 METAL PARAPET CAP.
329 MECHANICAL UNIT.
401 BUILDING SIGN BY VENDOR. REQUIRES ELECTRICAL.
402 DRIVE THRU WINDOW. REFER TO SHEET A1.0.
407 METAL CANOPIES BY VENDOR. REQUIRES ELECTRICAL.
409 ASSUME D/T LANE SURFACE IS 6" BELOW THE FINISH FLOOR. REFER TO GRADING & SITE PLAN.
411 CONCRETE CURB.
424 LINE OF ROOF BEYOND.
501 BUILDING ADDRESS NUMBER - OPAQUE APPLIQUE ON OUTSIDE OF GLAZING WHITE COLOR - ARIAL TYPEFACE 6" HEIGHT.

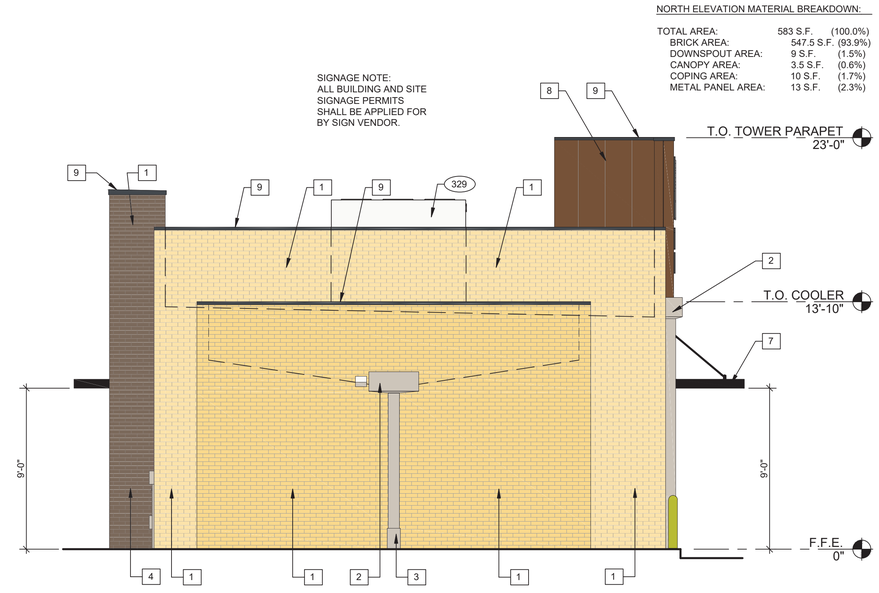
KEY NOTES **A**



SOUTH ELEVATION MATERIAL BREAKDOWN:

TOTAL AREA:	611 S.F.	(100.0%)
BRICK AREA:	316.5 S.F.	(51.8%)
STOREFRONT AREA:	124.5 S.F.	(20.4%)
CANOPY AREA:	12.5 S.F.	(2.0%)
COPING AREA:	6 S.F.	(0.9%)
METAL PANEL AREA:	152 S.F.	(24.9%)

SOUTH ELEVATION 1/4" = 1'-0" **2**



NOTE: REFERENCE TO SHEET A4.0 FOR COLOR LEGEND

NORTH ELEVATION MATERIAL BREAKDOWN:

TOTAL AREA:	583 S.F.	(100.0%)
BRICK AREA:	547.5 S.F.	(93.9%)
DOWNSPOUT AREA:	9 S.F.	(1.5%)
CANOPY AREA:	3.5 S.F.	(0.6%)
COPING AREA:	10 S.F.	(1.7%)
METAL PANEL AREA:	13 S.F.	(2.3%)

NORTH ELEVATION 1/4" = 1'-0" **3**

L+A ARCHITECTS INC. A.I.A
441 S. LIVERNOIS ROAD
SUITE 265
ROCHESTER HILLS, MI 48307
PHONE (248) 524-4700
FAX (248) 524-9746

PROJECT # 20023

	DATE	REMARKS
	2/1/2022	Site Plan Approval
	4/13/2022	Site Plan Approval
	5/11/2022	Site Plan Approval

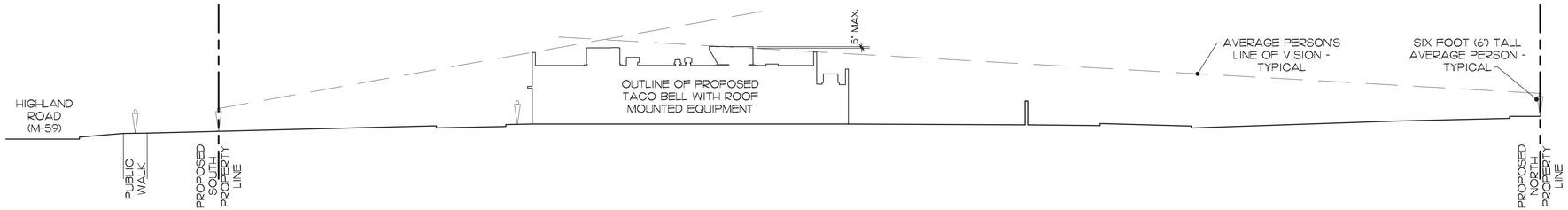
CONTRACT DATE:
BUILDING TYPE:
PLAN VERSION:
BRAND DESIGNER:
SITE NUMBER:
STORE NUMBER:
PA/PM:
DRAWN BY.:
JOB NO.:

GREAT LAKES TACO, L.L.C.
6305 Highland Road (M-59)
White Lake Twp., Michigan 48383

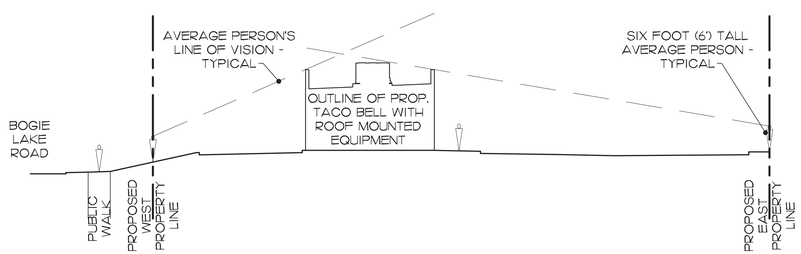
ENDEAVOR 2.0
EXTERIOR ELEVATIONS

A4.1

PLOT DATE: 5/11/2022



SITE SECTION 1/16" = 1'-0" **2**



SITE SECTION 1/16" = 1'-0" **1**

STATE OF MICHIGAN
GREGORY SCOT LAUTZENHEISER
ARCHITECT
NO. 1301031102
LICENSED ARCHITECT

L + A
ARCHITECTS
INC. A.I.A
441 S. LIVERNOIS ROAD
SUITE 265
ROCHESTER HILLS, MI 48307
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PROJECT # 20023

	DATE	REMARKS
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	4/13/2022	Site Plan Approval
	5/11/2022	Site Plan Approval

CONTRACT DATE:
BUILDING TYPE: END. MED40
PLAN VERSION: MARCH 2020
BRAND DESIGNER:
SITE NUMBER:
STORE NUMBER:
PA/PM:
DRAWN BY.:
JOB NO.:

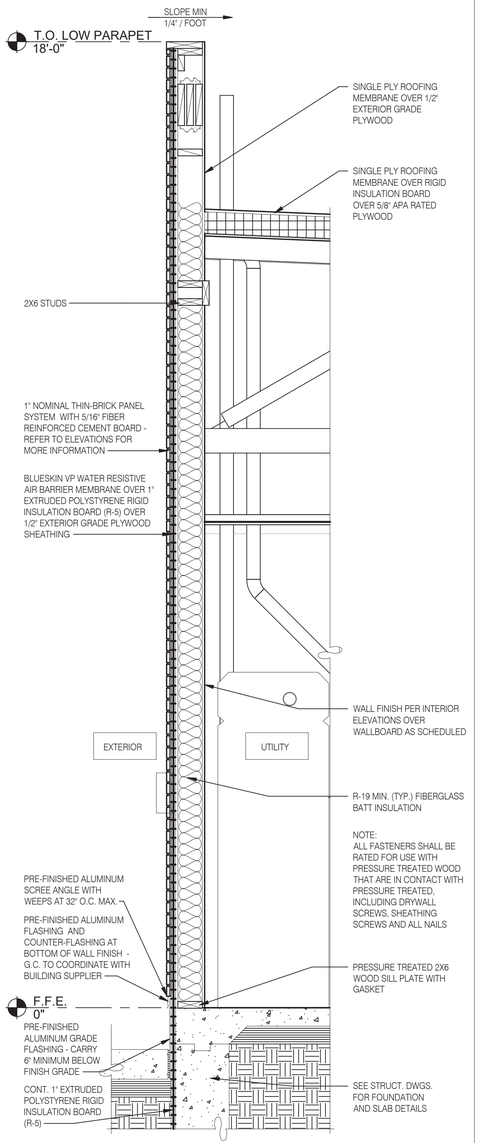
GREAT LAKES
TACO, L.L.C.
6305 Highland Road (M-59)
White Lake Twp., Michigan 48383

TACO BELL

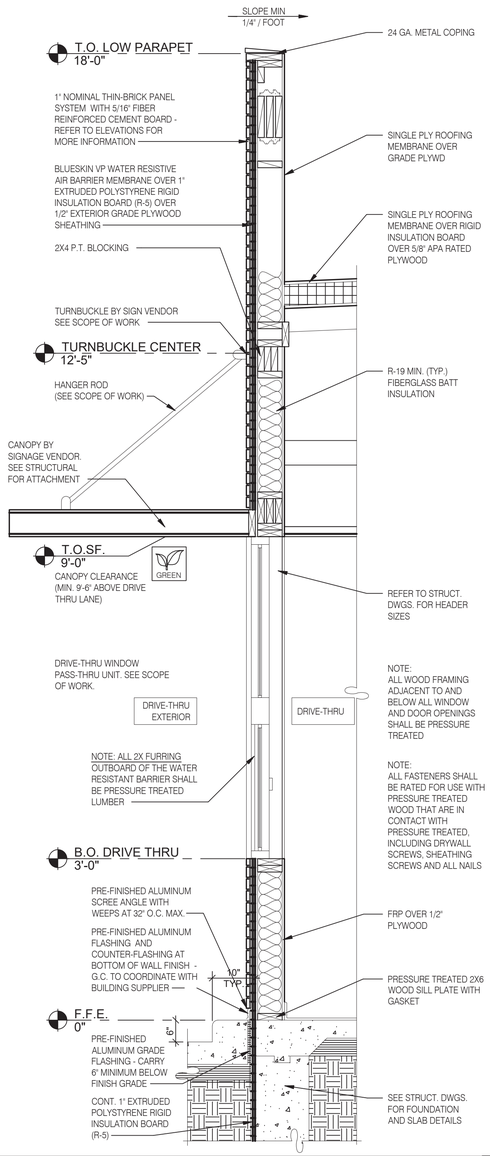
ENDEAVOR 2.0
SITE AND BUILDING SECTIONS

A4.2

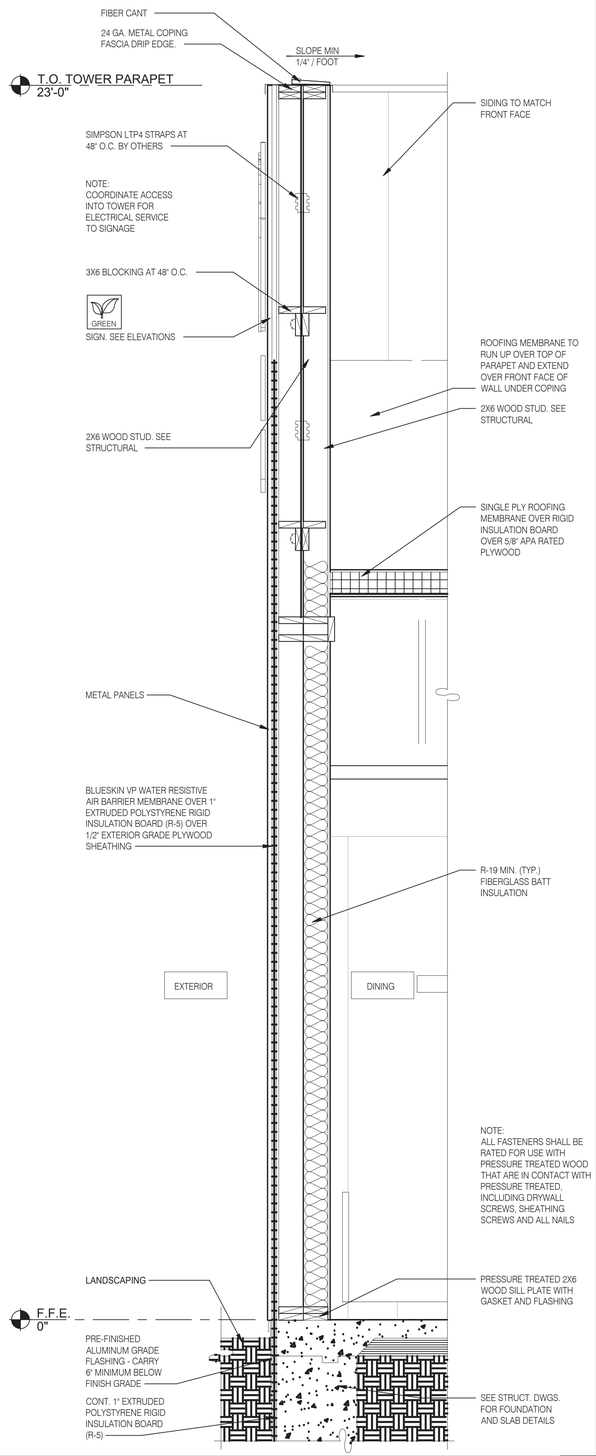
PLOT DATE: 5/11/2022



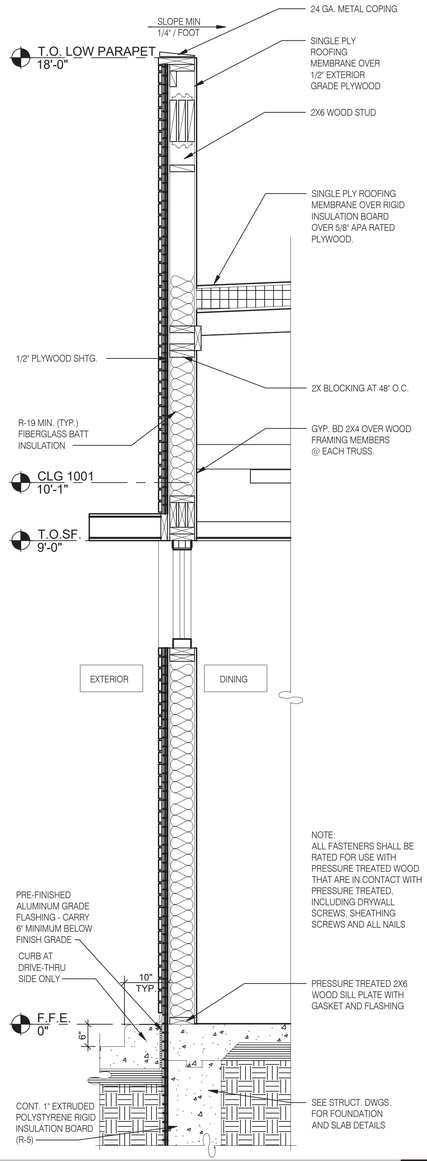
TYPICAL WALL SECTION 3/4" = 1'-0" **D**



WALL SECTION AT DRIVE THRU 3/4" = 1'-0" **C**



SECTION AT DINING - TOWER 3/4" = 1'-0" **B**



WALL SECTION AT DINING 3/4" = 1'-0" **A**

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LICENSED ARCHITECT

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PROJECT # 20023

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CONTRACT DATE:
BUILDING TYPE:
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BRAND DESIGNER:
SITE NUMBER:
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PA/PM:
DRAWN BY.:
JOB NO.:

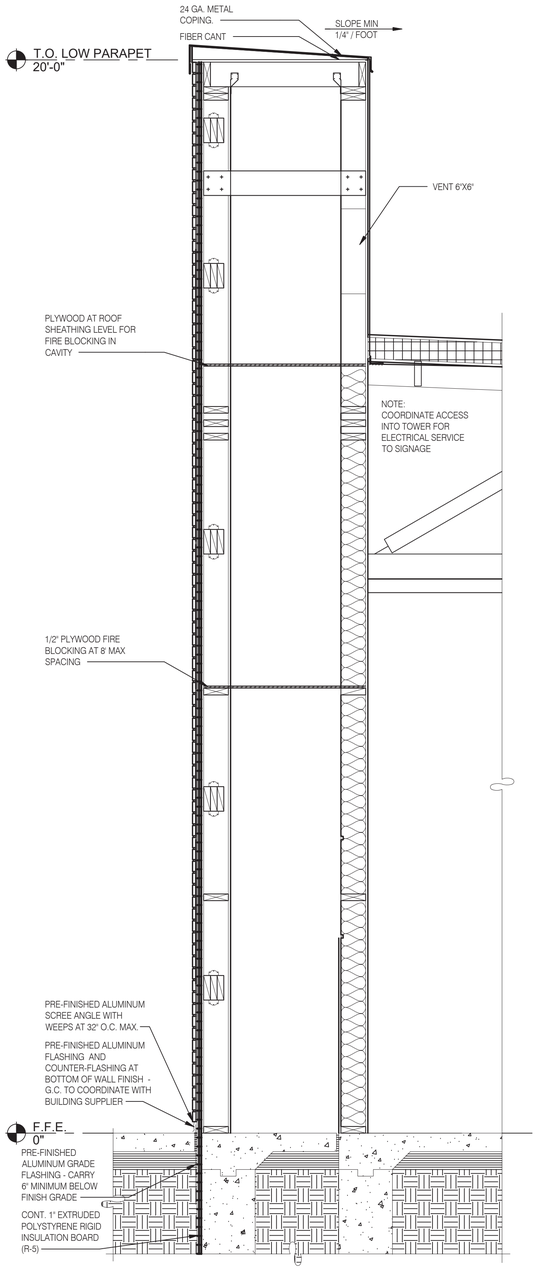
GREAT LAKES TACO, L.L.C.
6305 Highland Road (M-59)
White Lake Twp., Michigan 48383

TACO BELL

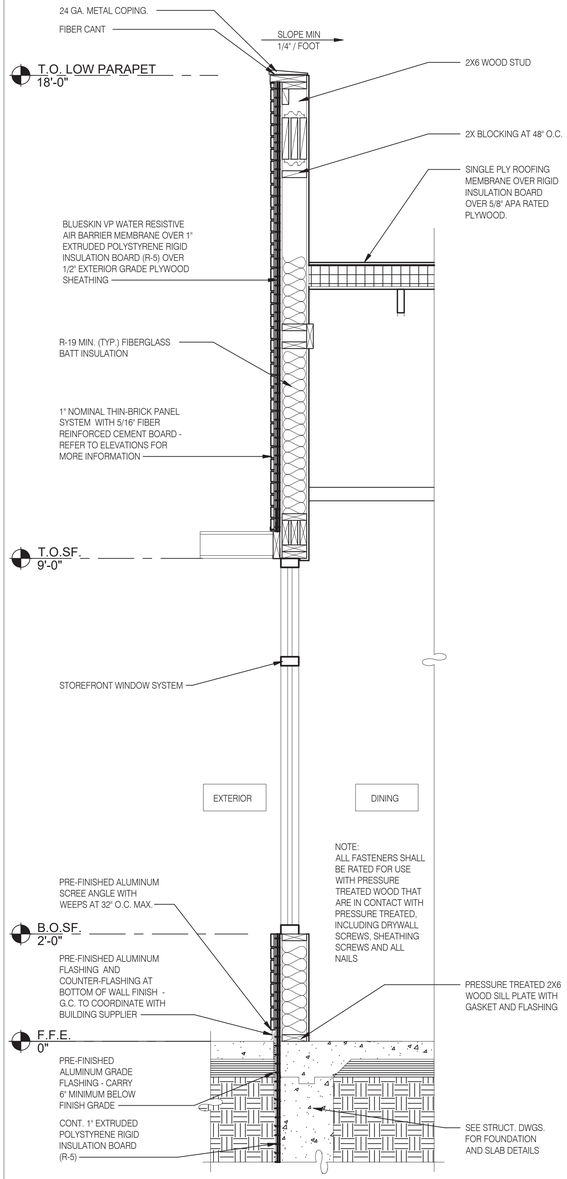
ENDEAVOR 2.0
WALL SECTIONS

A5.2

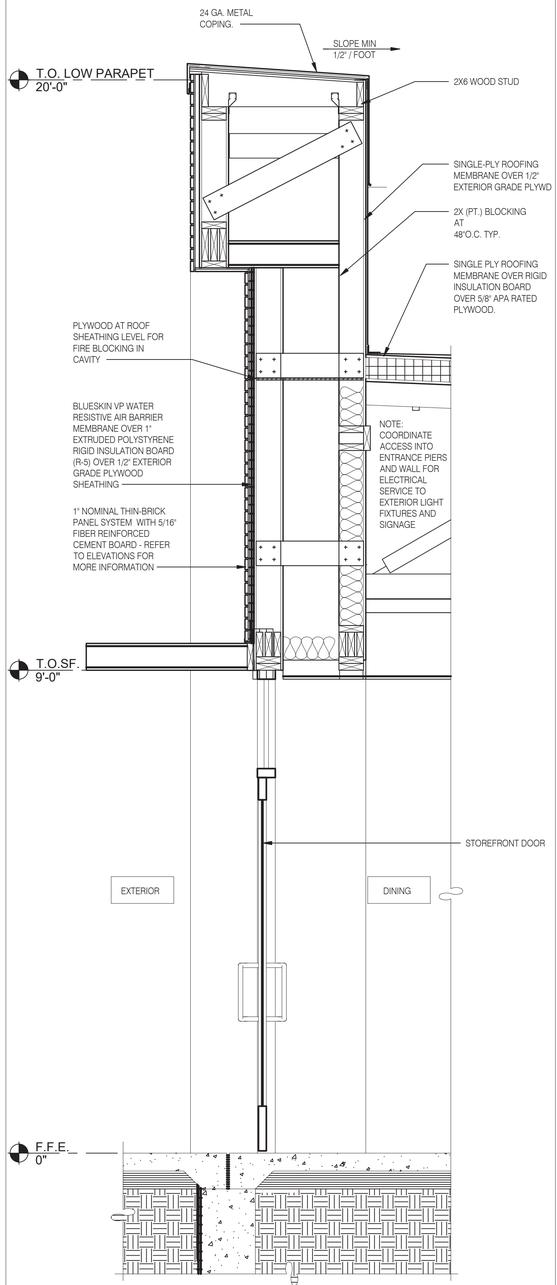
PLOT DATE: 5/11/2022



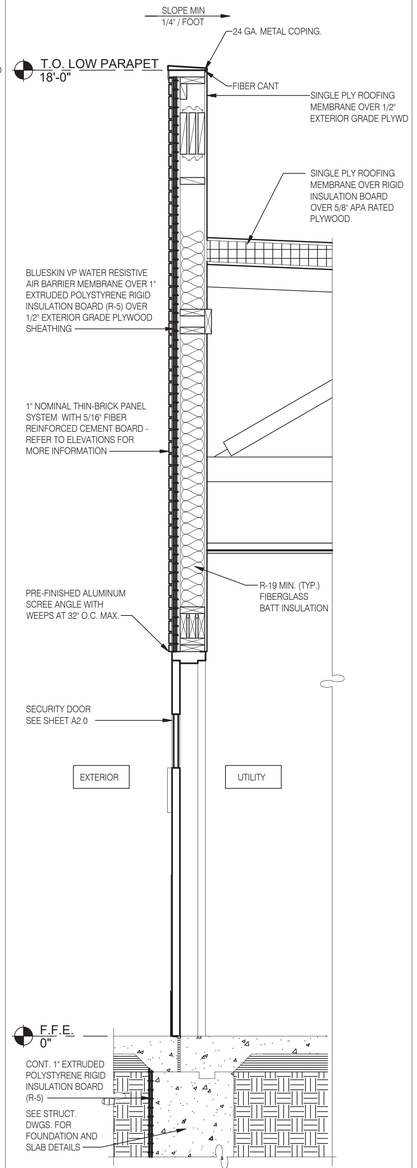
FRONT WALL SECTION 3/4" = 1'-0" **D**



FRONT WALL SECTION 3/4" = 1'-0" **C**



WALL SECTION AT DINING DOOR 3/4" = 1'-0" **B**



WALL SECTION AT SERVICE DOOR 3/4" = 1'-0" **A**

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LICENSED ARCHITECT

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SUITE 265
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PROJECT # 20023

	DATE	REMARKS
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CONTRACT DATE:

BUILDING TYPE:

PLAN VERSION:

BRAND DESIGNER:

SITE NUMBER:

STORE NUMBER:

PA/PM:

DRAWN BY.:

JOB NO.:

GREAT LAKES TACO, L.L.C.
6305 Highland Road (M-59)
White Lake Twp., Michigan 48383

TACO BELL

ENDEAVOR 2.0
WALL SECTIONS

A5.3

PLOT DATE: 5/11/2022

MATCH LINE
REFER TO SHEET C303A

SEDIMENTATION FOREBAY VOLUMES:	AS-BUILT VOLUME ABOVE WATER TABLE (CU. FT.)
971 / 972	23,859
972 / 974	63,480
974 / 976	140,225
976 / 978	191,654
976 / 980	240,632

RETENTION BASIN DESIGN INFORMATION
STORAGE VOLUME = 688,545 CU. FT.
2 - 100 YEAR STORM ELEV = 977.34
STORAGE VOLUME FROM 971 TO 980

EXISTING FENCE
EDGE OF WATER
TOP OF SLOPE
POND (DEPTH N.F.V.)

REFER TO SHEET C308 FOR PROFILE

CB 53 (4' DIA.) 3782.14/11324.66* RIM 997.46 IE 12" SW 991.81 IE 12" SE 984.81
3782.28/11324.18 997.79 984.78
11SLF - 12" @ 0.47%
60LF - 12" @ 0.38%
60LF - 12" @ 0.32%
CB 52 (4' DIA.) 3735.24/11287.42* RIM 998.12 IE 12" NE 992.00
3735.38/11288.05 998.07 992.02
3676.23/11435.23 992.63 992.92 983.56 972.33
CB 50 (6' DIA.) 3675.69/11434.06* RIM 992.45 IE 30" SE 972.85 IE 21" SW 984.14 IE 36" N 972.45
120LF - 21" @ 0.39%
121LF - 21" @ 0.89%
CB 48 (4' DIA.) 3594.86/11361.45 3594.99/11361.95 RIM 990.00 990.41 IE 18" SE 985.00 984.85
CB 49 (5' DIA.) 3568.14/11379.68 3568.99/11381.32* RIM 998.70 990.61 IE 12" SE 986.39 985.95 IE 18" NW 984.89 984.26 IE 18" SW 985.81 985.39 IE 21" NE 984.61 984.64
CB 46 (4' DIA.) 3536.86/11253.11 3536.87/11252.45* RIM 998.30 998.61 IE 15" S 986.25 986.02 IE 18" NE 986.05 985.77
32LF - 18" @ 1.84%
32LF - 18" @ 0.34%
33LF - 12" @ 1.64%
34LF - 12" @ 0.32%
133LF - 18" @ 0.29%
131LF - 18" @ 0.00%
30LF - 15" @ 0.28%
30LF - 15" @ 0.00%
30LF - 15" @ 0.23%
CB 45 (4' DIA.) 3506.87/11252.21* RIM 998.38 IE 15" S 986.33 IE 15" N 986.33
3306.99/11253.25 998.70 986.04 986.02
STUB CONNECTION #2 BULKHEAD 3476.87/11252.21 IE 15" 986.40
INLET 47 (2' DIA.) 3556.27/11409.5* RIM 990.70 990.87 IE 12" NW 986.50 986.49
3549.80/11409.17
GV #50
INLET 43 (2' DIA.) 3500.56/11461.79* RIM 988.15 IE 12" NE 983.05 983.52
3500.17/11462.35 988.06
STUB CONNECTION #1 BULKHEAD 3378.02/11469.13 IE 15" 976.50
35LF - 15" @ 0.40%
CB 40 (4' DIA.) 3386.45/11505.16* RIM 985.00 984.98 IE 15" N 976.36 976.16 IE 15" E 976.16 975.73
3386.07/11503.66
NOTE: STORM IS OF C76 PREMIUM JOINT.
CB 44 (5' DIA.) 3527.79/11524.94* RIM 988.17 988.03 IE 12" SW 985.75 983.24 IE 24" SE 975.45 973.11 IE 30" NW 975.25 972.63
3527.81/11525.55
CB 42 (5' DIA.) 3400.13/11550.26* RIM 985.10 IE 15" N 975.88 975.23 IE 18" E 976.03 976.69 IE 24" SE 974.10 973.78 IE 27" NW 973.90 973.28
3399.10/11558.80 985.06
65LF - 18" @ 0.26%
65LF - 18" @ 0.02%
CB 41 (4' DIA.) 3405.26/11623.06* RIM 986.30 IE 18" N 977.00
3406.10/11623.88 985.98 976.68
57LF - 15" @ 0.89%
57LF - 15" @ 0.50%
271LF - 24" @ 0.17%
271LF - 24" @ 0.17%
55LF - 12" @ 1.91%
50 LF - 12" @ 0.50%
INLET 39A (2' DIA) 3171.72/11639.3* RIM 980.75 980.0' IE 12" SW 976.20 976.0'
3171.93/11626.38
INLET 38A 11499.344 3138.61/11499.90 RIM 978.50 978.9' IE 18" 975.40 975.53'
3138.776/ SAN
GV #46
HYD W
DITCH
31LF - 18" @ 1.10%
28LF - 18" @ 0.39%
CB 38 (4' DIA.) 3136.06/11527.74* RIM 980.10 980.32 IE 12" S 975.19 IE 18" E 975.29 975.02
3135.34/11528.06
CB 39 (5' DIA.) 3130.82/11526.30 3130.23/11592.41 RIM 980.10 980.01' IE 12" NE 975.90 975.25' IE 18" W 974.98 974.54' IE 24" NW 974.76 974.23'
67 LF - 18" @ 0.50%
65LF - 18" @ 0.74%
GV #6 OFF-SITE
GV #5 OFF-SITE
GV #7 OFF-SITE
OUTLET H 3825.72/11443.75 3828.87/11443.47 IE 36" 972.09 972.12
MH 54 (6' DIA.) 3754.69/11430.94 3754.37/11435.80 RIM 989.00 993.30' IE 12" NW 984.15 984.24' IE 18" SE 979.89 979.41' IE 36" S 972.21 972.16' IE 36" N 972.31 972.18' PROVIDE 5' SUMP
CB 51 (4' DIA.) 3738.93/11495.83 3739.92/11495.85 RIM 985.00 985.81' IE 18" NW 980.00 979.68'
62LF - 18" @ 0.44%
78LF - 36" @ 0.19%
78LF - 36" @ 0.22%
74LF - 30" @ 0.17%
69LF - 12" @ 0.41%
69LF - 12" @ 0.32%
132LF - 27" @ 0.13%
132LF - 27" @ 0.13%
GV #57
TO CB 47 11'
TO CB 43 69'
TO CB 44 120'
GV #50
TO CB 43 44'
TO CB 44 93'
TO CB 47 31'
GV #7 OFF-SITE
TO HYD W 11.7'
TO CB 60.5'
TO INLET 39A 123.4'
GV #5 OFF-SITE
TO HYD W 17.5'
TO P.P. 23'
TO SAN 37'
GV #6 OFF-SITE
TO CB 38 18'
TO HYD W 45'
TO P.P. 16'
GV #46
TO SAN MH 22'
TO CB 38 27'
TO HYD W 46'
REFER TO SHEETS C303A & C303B FOR PLAN LOCATIONS OF THE ABOVE UTILITY CROSSINGS
DAVE'S CONEY ISLAND
McDONALD'S
McDONALD'S PYLON
FLAG POLE
CB RIM 983.15 IE 12" E 977.2 IE 12" E 977.4 IE 12" N 977.4
CB RIM 980.19 IE 12" E 975.1
4" ELECTRICAL POWER PVC PIPE PER UTILITY DRAWINGS
4" TELEPHONE PVC PIPE PER UTILITY DRAWINGS
SIGN "HICKON"
72.3'
PP 2
GV #4 OFF-SITE
19.3'
98.1'
SAN
CB RIM 977.07 IE 12" S 972.5
CB RIM 976.99
REFER TO NOTE 9 FOR R.O.W. WORK
REFER TO SHEET C308 FOR UTILITY CROSSING SCHEDULE

CB 27 (5' DIA.) 3490.21/10467.29* 3491.655/10469.200 RIM 988.70 980.50' IE 12" NE 976.41 976.01' IE 18" E 975.87 975.46' IE 12" SE 975.85 974.91' IE 21" SW 974.67 974.38'
CB 26 (7' DIA.) 3506.86/10666.67* 3506.822/10601.667 RIM 982.50 982.62' IE 12" E 978.18 978.06' IE 18" W 976.28 976.20' PROVIDE TRAP REFER TO DETAIL D3/C700
CB 25 (4' DIA.) 3506.87/10789.50 3507.01/10790.21 RIM 987.80 988.19' IE 12" N 985.11 983.11' IE 12" N 980.00 979.86'
179LF - 21" @ 0.60%
134LF - 18" @ 0.30%
134LF - 18" @ 0.55%
83LF - 12"
134LF - 12" @ 1.10%
IE 6" SE 977.60
57LF - 6" @ 1.00% MIN.
33LF - 6" @ 1.00% MIN.
C.O. #1 RIM 984.40 IE 6" 978.50
C.O. #2 RIM 984.40 IE 6" 977.93
984.61'
FF = 984.50
C.O. #4 RIM 984.48 IE 6" 981.00
C.O. #3 RIM 984.48 IE 6" 981.00
34 LF - 6" @ 1.00% MIN. (TYP. 2)
242LF - 12" @ 1.30%
242LF - 12" @ 0.85%
MH 27D (5' DIA.) 3416.01/10504.45* RIM 982.25 IE 12" 976.74 F.V. IE 12" E 976.77
3416.35/10508.15 962.00 976.01 975.76
43 LF - 6" @ 1.00% MIN. (TYP. 5)
REPLACE EXISTING GRATE WITH MANHOLE LID
CUT & CAP PIPE, BULKHEAD AT THE MANHOLE
C.O. #9 RIM 984.80 IE 6" 980.80
C.O. #8 RIM 984.60 IE 6" 981.60
C.O. #7 RIM 984.40 IE 6" 980.40
C.O. #6 RIM 984.20 IE 6" 980.20
C.O. #5 RIM 984.00 IE 6" 980.00
CB 27B (4' DIA.) 3370.42/10527.09* RIM 982.00 IE 12" SE 977.50 IE 12" NW 977.30 IE 6" E 978.11 PROVIDE TRAP REFER TO DETAIL D3/C700
CB 27C (5' DIA.) 3416.01/10746.84* 3417.48/10747.57 RIM 983.25 983.41' IE 12" S 978.83 IE 12" W 978.83 978.90' PROVIDE TRAP, REFER TO DETAIL D3/C700
74LF - 12" @ 1.31%
74LF - 12" @ 0.45%
CB 27F (5' DIA.) 3343.31/ 3345.01/10746.84* 10747.16 RIM 983.15 983.13' IE 12" N 979.15 977.86' PROVIDE TRAP, REFER TO DETAIL D3/C700
138LF - 12" @ 0.61%
133LF - 12" @ 0.45%
REPLACE EXISTING GRATE WITH EJIW 6527
CB 27A (4' DIA.) 3274.48/10619.57* 3275.28/10620.83 RIM 982.39 982.01' IE 12" NW 978.10 977.64' PROVIDE TRAP REFER TO DETAIL D3/C700

CROSSING SCHEDULE:

UC 1	BOTTOM OF 12" STORM = 962.55± TOP OF 12"&8" WATER = 961.00±
UC 2	BOTTOM OF 12" WATER = 977.00± TOP OF 27" STORM = 971.80±
UC 3	BOTTOM OF 30" STORM = 977.22± TOP OF 12" WATER = 975.72±
UC 4	BOTTOM OF 36" STORM = 979.87± TOP OF 12" WATER = 978.37±
UC 5	BOTTOM OF 30" STORM = 981.44± TOP OF 12"&4" WATER = 979.94±
UC 6	BOTTOM OF 12"&8"&4" WATER = 986.00± TOP OF 8" SANITARY = 985.50±
UC 7	BOTTOM OF 12"&4" WATER = 985.80± TOP OF 8" WATER = 984.30±
UC 8	BOTTOM OF 24" STORM = 984.36± TOP OF 6" WATER = 982.86±
UC 9	BOTTOM OF 24" STORM = 985.93± TOP OF 6" WATER = 984.43±
UC 10	NOT USED
UC 11	BOTTOM OF 24" STORM = 981.60± TOP OF 6" WATER = 980.10±
UC 12	BOTTOM OF 24" STORM = 982.18± TOP OF 8" SANITARY = 975.10±
UC 13	BOTTOM OF 8" WATER = 985.10± TOP OF 8" SANITARY = 974.95±
UC 14	BOTTOM OF 24" STORM = 982.50± TOP OF 6" WATER = 981.00±
UC 15	BOTTOM OF 24" STORM = 983.60± TOP OF 6" WATER = 982.10±
UC 16	BOTTOM OF 30" STORM = 983.15± TOP OF 8" SANITARY = 973.55±
UC 17	BOTTOM OF 24" STORM = 973.10± TOP OF 8" SANITARY = 960.10±
UC 18	BOTTOM OF 12" STORM = 979.60± TOP OF 8" WATER = 978.10±
UC 19	BOTTOM OF 18" STORM = 975.10± TOP OF 12" WATER = 973.50±
UC 20	BOTTOM OF 12" WATER = 973.00± TOP OF 18" SANITARY = 952.69±
UC 21	BOTTOM OF 24" STORM = 975.12± TOP OF 18" SANITARY = 952.60±
UC 22	BOTTOM OF 15" STORM = 976.22± TOP OF 12" WATER = 974.72±
UC 23	BOTTOM OF 18" STORM = 976.74± TOP OF 8" SANITARY = 974.16±
UC 24	BOTTOM OF 15" STORM = 986.16± TOP OF 8" WATER = 984.66±
UC 25	BOTTOM OF 21" STORM = 984.25± TOP OF 6" SANITARY = 982.75±
UC 26	BOTTOM OF 21" STORM = 984.17± TOP OF 6" SANITARY = 982.65±
UC 27	BOTTOM OF 6" SANITARY = 981.20± TOP OF 50" STORM = 975.80±
UC 28	BOTTOM OF 8" WATER = 986.50± TOP OF 36" STORM = 975.75±
UC 29	BOTTOM OF 12" WATER = 984.30± TOP OF 6" SANITARY = 982.95±
UC 30	BOTTOM OF 2-36" GAS = TOP OF 12" WATER =
UC 31	BOTTOM OF 2-36" GAS = TOP OF 8" WATER = } REFER TO SHEET C308
UC 32	BOTTOM OF 12" STORM = 975.90± TOP OF 8" SANITARY = 972.05±
UC 33	BOTTOM OF 12" STORM = 975.83± TOP OF 18" SANITARY = 952.57±
UC 34	NOT USED

CERTIFICATION IS PROVIDED FOR ASBUILT DATA ONLY
NAME_____ DATE_____
RICHARD HINSON
PROFESSIONAL ENGINEER
NO. 37071

GAS STATION STORM
SCALE: 1" = 30'

*BELOW: ALL CASTINGS ARE ASBUILT AS INDICATED **

STORM GRATE CAPACITY VERIFICATION

CASTING	GRATE OPENING (sq. in.)	INLET CAPACITY	ALLOWABLE CAPACITY (c.f.s.)	
EJIW 1040-02	185	1 cfs / 90 in2	2.06	SINGLE
EJIW 5235	220	1 cfs / 90 in2	2.44	SINGLE
EJIW 5236	440	1 cfs / 90 in2	4.89	DOUBLE
EJIW 6508	*280*	*1 cfs / 90 IN2*	*3.11*	*SINGLE*
EJIW 6527	*170*	*1 cfs / 90 IN2*	*1.89*	*SINGLE*
EJIW 7040 M1 T1	160	1 cfs / 90 in2	1.78	SINGLE
EJIW 7060 M1 T1	195	1 cfs / 90 in2	2.17	SINGLE
EJIW 7030 M2 T1/T3	260	1 cfs / 90 in2	2.89	SINGLE
EJIW 7031 M2 T1/T3	520	1 cfs / 90 in2	5.78	DOUBLE

DRAINAGE AREA No.	CATCH BASIN No.	AREA A acres	COEFF. C *	INT. I in/hr	FLOW Q10 Q=CiA c.f.s.	GRATE CAP. GP c.f.s.	EJIW * GRATE No.	
1	1	0.48	0.77	4.38	1.62	2.06	1040-02	
2	2	0.41	0.77	4.38	1.38	2.06	1040-02	
3	3	0.32	0.79	4.38	1.11	2.06	~~1040-02~~	6508
4	4	0.16	0.83	4.38	0.58	2.06	~~1040-02~~	6508
5	6	0.98	0.75	4.38	3.22	4.89	5236	
6	7	2.09	0.37	4.38	3.38	4.89	5236	
7	8	1.12	0.59	4.38	2.89	4.89	5236	
8	9	1.16	0.61	4.38	3.10	4.89	5236	
9	10	2.37	0.27	4.38	2.80	2.89	7030 T3	
12	14	0.49	0.75	4.38	1.61	2.17	7060	
13	15	0.46	0.73	4.38	1.47	2.06	1040-02	
14	17	1.71	0.63	4.38	4.71	2.17	7060	
15	18	1.36	0.79	4.38	4.70	2.44	5235	CATCH BASINS
16	19	1.32	0.79	4.38	4.56	2.44	5235	WITHIN SLOTTED
17	20	1.37	0.78	4.38	4.68	2.44	5235	DRAIN SYSTEM
N/A	21	N/A	N/A	N/A	2.17	2.17	7060 J	
18	22	0.15	0.72	4.38	0.47	2.17	7060	
19	23	0.11	0.80	4.38	0.39	2.17	7060	
20	24	1.06	0.25	4.38	1.16	2.17	7060	
21	25	0.07	0.80	4.38	0.25	2.17	7060	
22	26	1.56	0.47	4.38	3.21	5.78	7031 T3	
26	27	0.58	0.77	4.38	1.95	2.89	7030 T1	
24	27A	0.79	0.48	4.38	1.66	1.78	~~7040~~	6527
25	27B	0.41	0.81	4.38	1.45	1.78	7040	
23	27C	0.12	0.80	4.38	0.42	2.17	7060	
28	28	0.55	0.75	4.38	1.80	1.78	7040	
27	28A	0.73	0.78	4.38	2.49	2.89	7030 T3	
30	29	0.76	0.78	4.38	2.59	2.89	7030 T1	
29	29A	0.12	0.77	4.38	0.40	2.17	7060	
32	30	0.67	0.78	4.38	2.29	2.89	7030 T1	
31	30A	0.12	0.77	4.38	0.40	2.17	7060	
34	31	0.38	0.79	4.38	1.31	1.78	7040	
33	31A	0.33	0.71	4.38	1.03	2.17	7060	
35	32	0.09	0.59	4.38	0.23	1.78	7040	
36	33	0.10	0.80	4.38	0.35	1.78	7040	
37	35	0.93	0.75	4.38	3.05	5.78	7031 T3	
38	36	0.71	0.51	4.38	1.58	1.78	7040	
39	37	0.26	0.77	4.38	0.88	1.78	7040	
41	38	0.22	0.74	4.38	0.71	2.17	7060	
40	38A	2.02	0.20	4.38	1.77	2.06	1040-02	
42	39	1.17	0.30	4.38	1.54	2.17	7060	
N/A	39A	N/A	N/A	N/A	1.77	2.06	1040-02	
44	40	0.13	0.58	4.38	0.33	2.17	7060	
45	41	1.09	0.20	4.38	0.95	2.06	1040-02	
46	42	0.18	0.61	4.38	0.48	2.17	7060	
47	43	0.57	0.64	4.38	1.04	2.17	7060	
48	44	0.27	0.56	4.38	0.66	2.17	7060	
50	45	0.09	0.80	4.38	0.32	2.17	7060	
51	46	0.09	0.80	4.38	0.32	2.17	7060	
52	47	0.05	0.80	4.38	0.18	2.17	7060	
53	48	1.87	0.20	4.38	1.64	2.06	1040-02	
54	49	0.05	0.80	4.38	0.18	2.17	7060	
55	50	0.18	0.64	4.38	0.50	2.17	7060	
58	51	1.33	0.20	4.38	1.16	2.06	1040-02	
56	52	0.20	0.73	4.38	0.64	2.17	7060	
57	53	0.22	0.71	4.38	0.68	2.17	7060	

GENERAL NOTES:
1. REFER TO SHEET C400C FOR GENERAL CONSTRUCTION NOTES, GENERAL UTILITY NOTES AND GRADING NOTES
2. UNDERDRAINS AT CATCH BASINS SHALL BE INSTALLED WITH A MINIMUM OF 15" COVER FROM FINISHED SUBGRADE.
3. UD - UNDERDRAIN (REFER TO DETAIL B2/C700).
4. PROTECT AND MAINTAIN CROSSINGS OF OTHER UTILITY LINES.
5. ALL UTILITIES SHALL END 5' FROM THE BUILDING UNLESS NOTED OTHERWISE.
6. ALL UNDERDRAINS (UD) ARE 4" DIA. AT MINIMUM SLOPE OF 0.50% UNLESS OTHERWISE NOTED (REFER TO DETAIL B2/C700).
7. ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN CONFORMANCE WITH WHITE LAKE TOWNSHIP AND OAKLAND COUNTY DESIGN STANDARDS.
8. END SECTIONS ARE INCLUDED IN PIPE LENGTH SHOWN.
9. REFER TO PLANS PREPARED BY TETRA TECH MPS FOR ALL WORK WITHIN HIGHLAND ROAD (M-59) RIGHT-OF-WAY LIMITS.
10. DIMENSIONS AND/OR COORDINATES ARE TO BACK OF CURB, OUTSIDE FACE OF BUILDING FOUNDATION, EDGE OF PAVEMENT OR CENTER OF STRUCTURE.
11. ALL CATCH BASINS SHALL HAVE A MINIMUM 2' SUMP.
12. THE "*" DENOTES BACK OF CURB COORDINATE AT CATCH BASIN .
13. THE ENVIRONMENTAL CATCH BASINS WITH TRAPS SHALL BE INSPECTED PERIODICALLY AND CLEANED WHEN ANY CONTAMINATES ARE NOTED. AT A MINIMUM THE CATCH BASIN SUMPS WILL BE VACTORED ONCE A YEAR.

MATERIAL NOTES:
(ALL MATERIAL SHALL COMPLY WITH WHITE LAKE TOWNSHIP, OAKLAND COUNTY & PROJECT SPECIFICATIONS).

STORM SEWER:
REFER TO PROJECT SPECIFICATIONS. NON-REINFORCED CONCRETE PIPE SHALL NOT BE USED. MANUFACTURERS RECOMMENDATION FOR MINIMUM COVER OVER PIPE DURING CONSTRUCTION SHALL BE CONSIDERED WHEN SELECTING A PIPE MATERIAL.
PREMIUM JOINTS SHALL BE USED FOR ALL PIPING.
ALL CORRUGATED METAL PIPING SHALL BE ALUMINIZED.

FOR STORM SEWER SERVICE LEAD PIPES USE 8" PVC SCHEDULE 40

UNDERDRAIN:
4" PERFORATED, FLEXIBLE, CORRUGATED POLYETHYLENE TUBING WITH FACTORY INSTALLED FILTER SOCK.

UC 16 FOR WATERMAIN CROSSINGS REFER TO WHITE LAKE TOWNSHIP DETAILS. REFER TO C303B FOR ALL UTILITY CROSSING SCHEDULE.

NORTH
0 60 120 180
SCALE: 1" = 60'

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

* DENOTES BACK OF CURB COORDINATES.

NO.	REVISION OR ISSUE	DATE
	SUBJECT	
	TOWNSHIP SUBMITTAL	02-21-06

SEAL

DRAWN MUELHAUPT
CHECKED COUNSELL
DESIGNED DESSUREAULT
DEPT.MGR. WOOD
PROJ.MGR. HINSON

JOB TITLE
MIEIJER #227
6001 HIGHLAND ROAD, WHITE LAKE, MI 48383
STORM SEWER PLAN

SSOE, INC.
ARCHITECTS ENGINEERS PLANNERS LAND SURVEYORS
1050 WILSHIRE DR. - SUITE #260 TROY, MICHIGAN 48084
TEL. 248-643-6222 FAX 248-643-6225

JOB NO.: 95-6165-10
OWNER JOB NO.: J001453227
STORE NO.: 227
C303B

REF-ASC3 IS:+ASC3
REF-HSE4
REF-ASC2 PLOTTED DATE: 3/9/11 - 11:16:1
REF-ASC1 NO PEN TABLE
REF-ASC3 IS:+ASC3
REF-HSE4
REF-ASC2 PLOTTED DATE: 3/9/11 - 11:16:1
REF-ASC1 NO PEN TABLE
SEND TO: DP1-*ASC1* JOB NO. 95616-10 PRF-*PRS1*

NOTE:

REFER TO SHEETS C303A AND C303B FOR NOTES AND LEGEND.

NORTH

0 100 200 300

SCALE: 1" = 100'

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

HIGHLAND ROAD (M-59)

NO.	DATE	REVISION OR ISSUE
6	06-30-04	SI #15
5	05-23-03	FSPA SUBMITTAL
4	04-05-03	SPA SUBMITTAL
3	03-14-03	ISSUE FOR BIDS
2	02-25-03	SPA SUBMITTAL

SEAL

DRAWN MUELHAUPT
CHECKED COUNSELL
DESIGNED DESSUREAULT
DEPT.MGR. WOOD
PROJ.MGR. HINSON

JOB TITLE
MEIJER - 227
6001 HIGHLAND ROAD, WHITE LAKE, MI 48383

STORM SEWER PLAN COMPOSITE

SSOE, INC.
ARCHITECTS ENGINEERS PLANNERS LAND SURVEYORS
1050 WILSHIRE DR. - SUITE #280
TROY, MICHIGAN 48084
TEL. 248-643-6222
FAX 248-643-6225

JOB NO.: 95-6165-10
OWNER JOB NO.:
J001433227
STORE NO.:
227

C303

SEND TO: *SEND* DF: C:\DGN\MEIJER\95GBR\5165C303.DGN RF:*REF1
JOB NO. 95G165-10 PRF:*PRF* NO PEN TABLE
RF:*REF2 PLOTTED DATE: 07/01/2004 7:20:46 AM
RF:*REF3 RF:*REF4
RF:*REF5 RF:*REF6
RF:*REF7 RF:*REF8
RF:*REF9 RF:*REF10
RF:*REF11 RF:*REF12

DRAINAGE AREA

AREA IN ACRES — RUNOFF COEFFICIENT

DRAINAGE AREA KEY

NOTE:

1. REFER TO SHEET C400D FOR STORM SEWER CALCULATIONS.
2. REFER TO SHEET C307 & C400D FOR DETENTION BASIN, SEDIMENTATION FOREBAY, AND RETENTION BASIN VOLUME CALCULATIONS.

AREA OF OVERLAPPING DRAINAGE AREAS. THIS AREA HAS BEEN ACCOUNTED FOR IN THE CALCULATION FLOWS IN THE CATCH BASINS ALONG THE SOUTH DRIVE. THIS HAS BEEN DONE TO ACCOUNT FOR ANY SURFACE WATER THAT OVERFLOWS AND SKIPS ACROSS THE SLOTTED DRAIN AND IS SUBSEQUENTLY COLLECTED BY THE DOWN-STREAM CATCH BASINS.

NORTH

0 100 200 300

SCALE: 1" = 100'

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

REFER TO TETRA TECH MPS DRAWINGS FOR WORK WITHIN HIGHLAND RD. (M-59) R.O.W.

NO.	REVISION OR ISSUE	DATE	SUBJECT
		05-23-03	FSPA SUBMITTAL
		04-05-03	SPA SUBMITTAL
		03-14-03	ISSUE FOR BIDS
		02-25-03	SPA SUBMITTAL

SEAL

DRAWN MUELHAUPT
CHECKED COUNSELL
DESIGNED DESSUREAULT
DEPT. MGR. WOOD
PROJ. MGR. HINSON

JOB TITLE
MEIJER - 227
6001 HIGHLAND ROAD, WHITE LAKE, MI 48383

STORM DISTRICT MAP

SSOE, INC.
ARCHITECTS ENGINEERS PLANNERS LAND SURVEYORS
1050 WILSHIRE DR. - SUITE #260
TROY, MICHIGAN 48084
TEL. 248-643-6222
FAX 248-643-6225

JOB NO.: 95-6165-10
OWNER JOB NO.:
J001433227
STORE NO.:
227

C306

SEND TO: *SEND* DF: c:\dgn\meijer\95X6X01\X56c306.dgn RF: *REF* PRF: *PRF*
JOB NO: 95X65-10 RF: -XEF1 No Pen Table
RF: -XEF2 PLOTTED DATE: 07/31/2008 10:26 AM
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RF: -XEF5 RF: -XEF6
RF: -XEF7 RF: -XEF8
RF: -XEF9 RF: -XEF10
RF: -XEF11 RF: -XEF12

EXHIBIT A

PROPERTY & CROSS ACCESS EASEMENT DESCRIPTIONS:

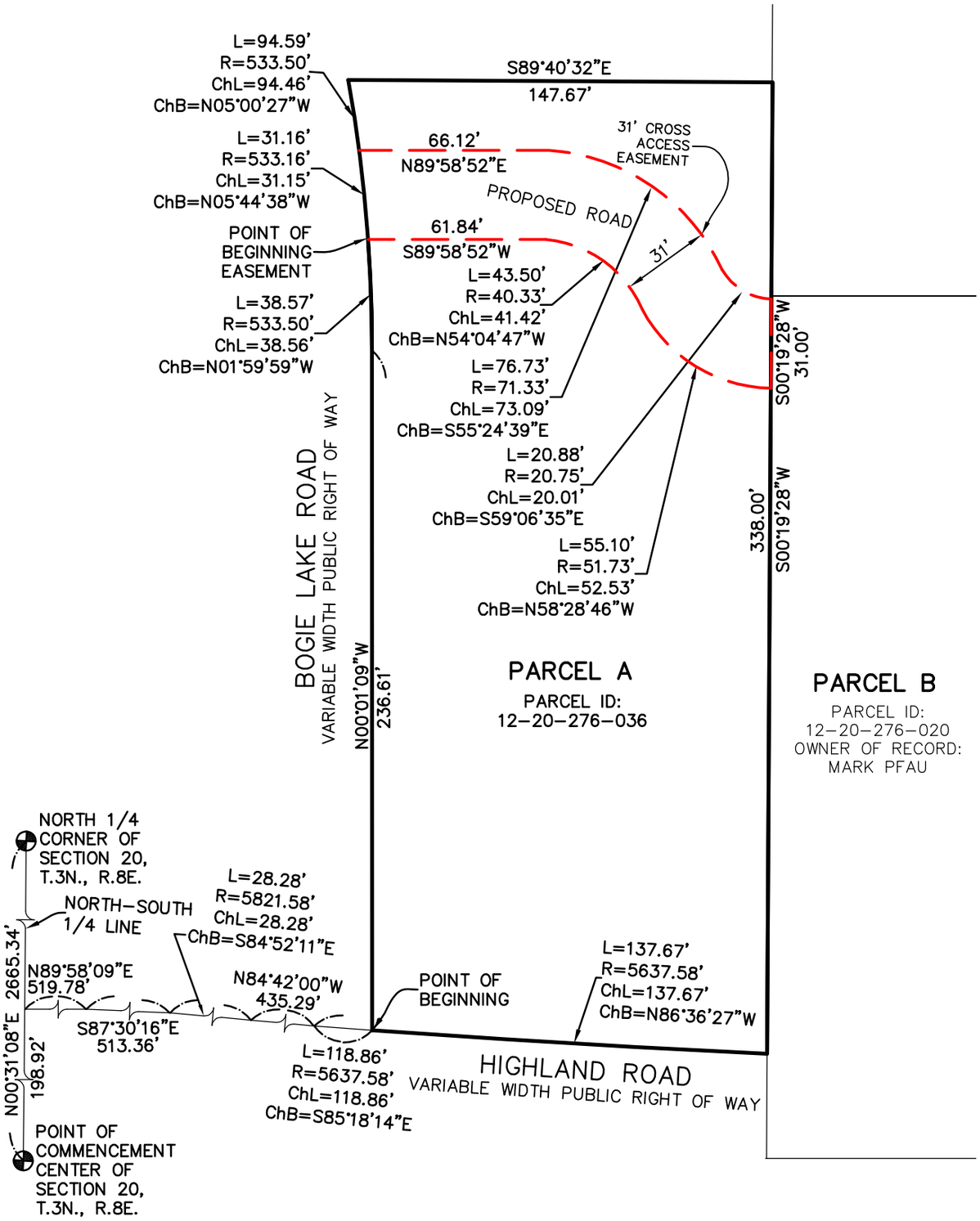
SEE SHEET 2 OF 2

NORTH

SCALE: 1"=50'

10' 30' 50'

0' 20' 40' 100'



REVISED PER REVIEW COMMENTS 05-18-22
REVISED PARCEL ID OF SUBJECT PROPERTY 03-01-22

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FAX: (586) 772.4048	FAX: (586) 772.4048	FAX: (734) 994.0667	FAX: (810) 694.9955

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PREPARED FOR: DORTCH ENTERPRISES	
FIELD SURVEY: N/A	DATE: FEBRUARY 09, 2022
DRAWN BY: JDM	SHEET: 1 OF 2
SCALE: 1" = 50'	JOB NO.: 20-3619

EXHIBIT A

PROPERTY DESCRIPTION PARCEL A:

LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH–SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 118.86 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 85 DEGREES 18 MINUTES 14 SECONDS EAST, 118.86 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00 DEGREES 01 MINUTE 09 SECONDS WEST, 236.61 FEET; THENCE 94.59 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 533.50 FEET, CHORD BEARING AND DISTANCE OF NORTH 05 DEGREES 00 MINUTES 27 SECONDS WEST, 94.46 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST, 147.67 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST, 338.00 FEET; THENCE 137.67 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF NORTH 86 DEGREES 36 MINUTES 27 SECONDS WEST, 137.67 FEET TO THE POINT OF BEGINNING.

CROSS ACCESS EASEMENT DESCRIPTION:

LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION 20; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH–SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 118.86 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 85 DEGREES 18 MINUTES 14 SECONDS EAST, 118.86 FEET; THENCE NORTH 00 DEGREES 01 MINUTE 09 SECONDS WEST ALONG THE WEST LINE OF PARCEL A, 236.61 FEET; THENCE 38.57 FEET ALONG A CURVE TO THE LEFT ALONG THE WEST LINE OF PARCEL A, WITH A RADIUS OF 533.50 FEET, CHORD BEARING AND DISTANCE OF NORTH 01 DEGREES 59 MINUTES 59 SECONDS WEST, 38.56 FEET TO THE POINT OF BEGINNING OF A 31' CROSS ACCESS EASEMENT; THENCE 31.16 FEET ALONG A CURVE TO THE LEFT ALONG THE WEST LINE OF PARCEL A, WITH A RADIUS OF 533.16 FEET, CHORD BEARING AND DISTANCE OF NORTH 05 DEGREES 44 MINUTES 38 SECONDS WEST, 31.15 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 52 SECONDS EAST, 66.12 FEET; THENCE 76.73 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 71.33 FEET, CHORD BEARING AND DISTANCE OF SOUTH 55 DEGREES 24 MINUTES 39 SECONDS EAST, 73.09 FEET; THENCE 20.88 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 20.75 FEET, CHORD BEARING AND DISTANCE OF SOUTH 59 DEGREES 06 MINUTES 35 SECONDS EAST, 20.01 FEET TO A POINT ON THE EAST LINE OF PARCEL A; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST ALONG THE EAST LINE OF PARCEL A, 31.00 FEET; THENCE 55.10 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 51.73 FEET, CHORD BEARING AND DISTANCE OF NORTH 58 DEGREES 28 MINUTES 46 SECONDS WEST, 52.53 FEET; THENCE 43.50 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 40.33 FEET, CHORD BEARING AND DISTANCE OF NORTH 54 DEGREES 04 MINUTES 47 SECONDS WEST, 41.42 FEET; THENCE SOUTH 89 DEGREES 58 MINUTES 52 SECONDS WEST, 61.84 FEET TO A POINT ON THE WEST LINE OF PARCEL A, SAID POINT ALSO BEING THE POINT OF BEGINNING.

REVISED PER REVIEW COMMENTS 05–18–22
REVISED PARCEL ID OF SUBJECT PROPERTY 03–01–22

KEM-TEC
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A GROUP OF COMPANIES

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FAX: (586) 772.4048	FAX: (586) 772.4048	FAX: (734) 994.0667	FAX: (810) 694.9955

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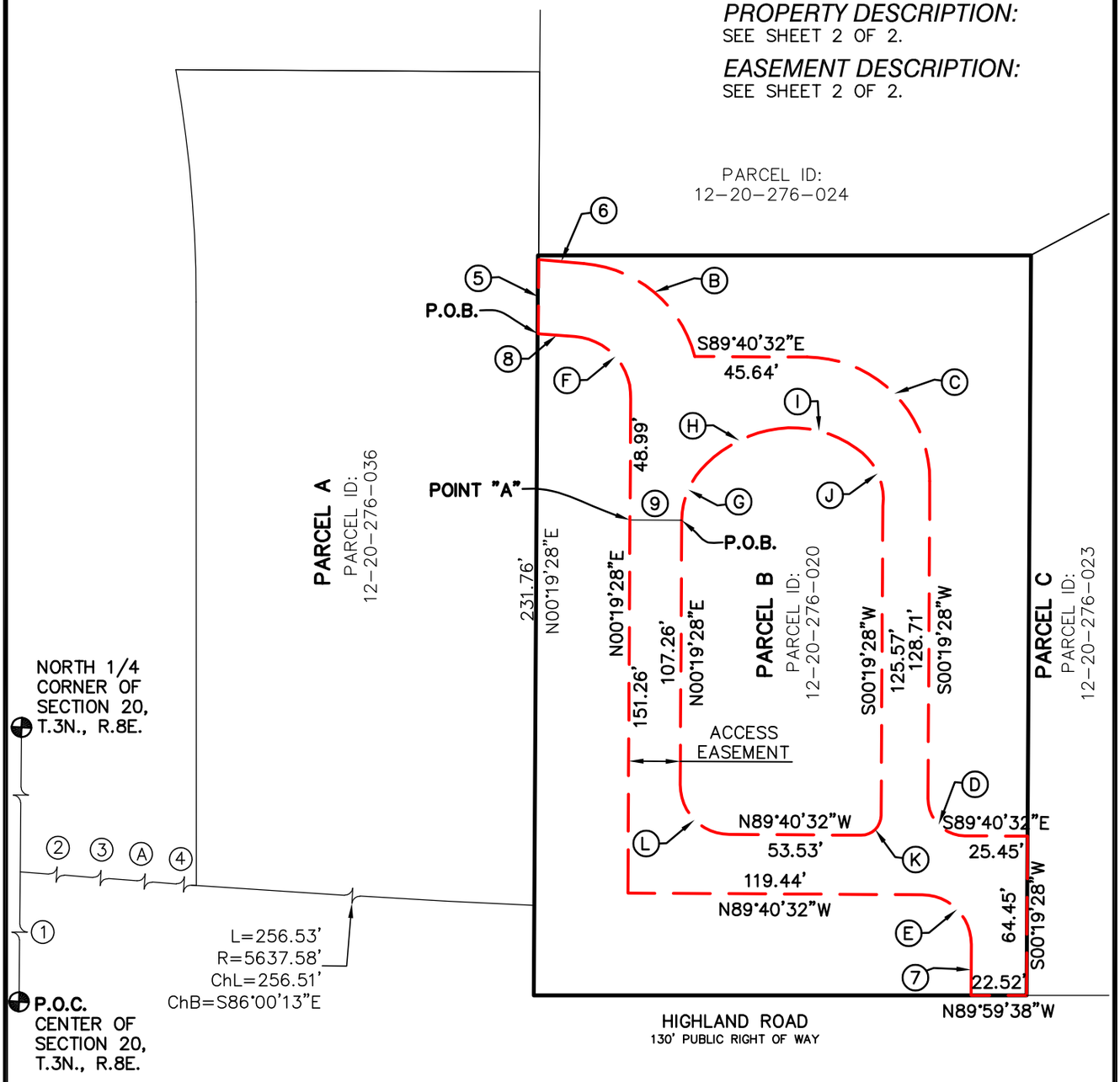
PREPARED FOR: DORTCH ENTERPRISES	
FIELD SURVEY: N/A	DATE: FEBRUARY 09, 2022
DRAWN BY: JDM	SHEET: 2 OF 2
SCALE: N/A	JOB NO.: 20–03619

EXHIBIT B

PROPERTY DESCRIPTION:
SEE SHEET 2 OF 2.

EASEMENT DESCRIPTION:
SEE SHEET 2 OF 2.



CURVE TABLE

	LENGTH	RADIUS	ChL	ChB
A	28.28'	5821.58'	28.28'	S84°52'11"E
B	62.65'	50.33'	58.68'	S50°06'47"E
C	78.54'	50.00'	70.71'	S44°40'32"E
D	23.56'	15.00'	21.21'	S44°40'32"E
E	31.42'	20.00'	28.28'	N44°40'32"W
F	37.61'	24.45'	34.01'	N41°43'24"W
G	25.60'	31.52'	24.91'	N23°35'40"E
H	32.97'	51.67'	32.41'	N63°46'15"E
I	33.60'	44.49'	32.80'	S75°54'05"E
J	26.98'	24.63'	25.65'	S24°40'35"E
K	12.57'	8.00'	11.31'	S45°19'28"W
L	31.42'	20.00'	28.28'	N44°40'32"W

LINE TABLE

	BEARING	DISTANCE
1	N00°31'08"E	198.92'
2	N89°58'09"E	519.78'
3	S87°30'16"E	513.36'
4	S84°42'00"E	435.29'
5	N00°19'28"E	30.07'
6	S85°00'24"E	18.32'
7	N00°19'28"E	20.68'
8	N86°13'46"W	14.88'
9	S89°40'32"E	21.00'

NORTH

SCALE: 1"=60'

0' 20' 60'
10' 30'

REVISED PER REVIEW COMMENTS 05-18-22
REVISED PARCEL ID OF SUBJECT PROPERTY 03-01-22

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PREPARED FOR: DORTCH ENTERPRISES	
FIELD SURVEY: N/A	DATE: FEBRUARY 09, 2022
DRAWN BY: MRJ	SHEET: 1 OF 2
SCALE: 1" = 60'	JOB NO.: 20-03619

EXHIBIT B

PROPERTY DESCRIPTION PARCEL ID: 12-20-276-020

LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH–SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 118.86 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 85 DEGREES 18 MINUTES 14 SECONDS EAST, 118.86 FEET; THENCE 137.67 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 86 DEGREES 36 MINUTES 27 SECONDS EAST, 137.67 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST 36.41 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00 DEGREES 19 MINUTES 28 SECONDS EAST 300.00 FEET; THENCE EAST 200.00 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST 300.00 FEET; THENCE WEST 200 FEET TO THE POINT OF BEGINNING.

ALSO DESCRIBED AS:

A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS BEGINNING AT A POINT DISTANT WEST 310.00 FEET AND NORTH 00 DEGREES 40 MINUTES 00 SECONDS EAST 80.00 FEET AND WEST 374.48 FEET FROM EAST 1/4 CORNER; THENCE WEST 200.00 FEET ALONG NORTH LINE OF M–59 HWY.; THENCE NORTH 00 DEGREES 19 MINUTES 28 SECONDS EAST 300.00 FEET; THENCE EAST 200.00 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST 300.00 FEET TO THE POINT OF BEGINNING.

ACCESS EASEMENT DESCRIPTION:

LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION 20; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH–SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 256.53 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 86 DEGREES 00 MINUTES 13 SECONDS EAST, 256.51 FEET TO A POINT ON THE WEST LINE OF PARCEL B; THENCE NORTH 00 DEGREES 19 MINUTE 28 SECONDS EAST ALONG THE WEST LINE OF PARCEL B, 231.76 FEET TO THE POINT OF BEGINNING OF A VARIABLE WIDTH ACCESS EASEMENT; THENCE CONTINUING NORTH 00 DEGREES 19 MINUTES 28 SECONDS EAST ALONG THE WEST LINE OF PARCEL B, 30.07 FEET; THENCE SOUTH 85 DEGREES 00 MINUTES 24 SECONDS EAST, 18.32 FEET; THENCE 62.65 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 50.33 FEET, CHORD BEARING AND DISTANCE OF SOUTH 50 DEGREES 06 MINUTES 47 SECONDS EAST, 58.68 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST, 45.64 FEET; THENCE 78.54 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 50.00 FEET, CHORD BEARING AND DISTANCE OF SOUTH 44 DEGREES 40 MINUTES 32 SECONDS EAST, 70.71 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST, 128.71 FEET; THENCE 23.56 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 15.00 FEET, CHORD BEARING AND DISTANCE OF SOUTH 44 DEGREES 40 MINUTES 32 SECONDS EAST, 21.21 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST, 25.45 FEET TO A POINT ON THE EAST LINE OF PARCEL B; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST ALONG THE EAST LINE OF PARCEL B, 64.45 FEET TO A POINT ON THE SOUTH LINE OF PARCEL B; THENCE NORTH 89 DEGREES 59 MINUTES 38 SECONDS WEST ALONG THE SOUTH LINE OF PARCEL B, 22.52 FEET; THENCE NORTH 00 DEGREES 19 MINUTES 28 SECONDS EAST, 20.68 FEET; THENCE 31.42 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 20.00 FEET, CHORD BEARING AND DISTANCE OF NORTH 44 DEGREES 40 MINUTES 32 SECONDS WEST, 28.28 FEET; THENCE NORTH 89 DEGREES 40 MINUTES 32 SECONDS WEST, 119.44 FEET; THENCE NORTH 00 DEGREES 19 MINUTES 28 SECONDS EAST, 151.26 FEET TO POINT "A"; THENCE CONTINUING NORTH 00 DEGREES 19 MINUTES 28 SECONDS EAST, 48.99 FEET; THENCE 37.61 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 24.45 FEET, CHORD BEARING AND DISTANCE OF NORTH 41 DEGREES 43 MINUTES 24 SECONDS WEST, 34.01 FEET; THENCE NORTH 86 DEGREES 13 MINUTES 46 SECONDS WEST, 14.88 FEET TO A POINT ON THE WEST LINE OF PARCEL B, SAID POINT ALSO BEING THE POINT OF BEGINNING. ALSO COMMENCING AT POINT "A", SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST, 21.00 FEET TO THE POINT OF BEGINNING; THENCE 25.60 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 31.52 FEET, CHORD BEARING AND DISTANCE OF NORTH 23 DEGREES 35 MINUTES 40 SECONDS EAST, 24.91 FEET; THENCE 32.97 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 44.49 FEET, CHORD BEARING AND DISTANCE OF NORTH 63 DEGREES 46 MINUTES 15 SECONDS EAST, 32.41 FEET; THENCE 33.60 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 44.49 FEET, CHORD BEARING AND DISTANCE OF SOUTH 75 DEGREES 54 MINUTES 05 SECONDS EAST, 32.80 FEET; THENCE 26.98 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 24.63 FEET, CHORD BEARING AND DISTANCE OF SOUTH 24 DEGREES 40 MINUTES 35 SECONDS EAST, 25.65 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST, 125.57 FEET; THENCE 12.57 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 8.00 FEET, CHORD BEARING AND DISTANCE OF SOUTH 45 DEGREES 19 MINUTES 28 SECONDS WEST, 11.31 FEET; THENCE NORTH 89 DEGREES 40 MINUTES 32 SECONDS WEST, 53.53 FEET; THENCE 31.42 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 20.00 FEET, CHORD BEARING AND DISTANCE OF NORTH 44 DEGREES 40 MINUTES 32 SECONDS WEST, 28.28 FEET; THENCE NORTH 00 DEGREES 19 MINUTES 28 SECONDS EAST, 107.26 FEET TO THE POINT OF BEGINNING.

REVISED PER REVIEW COMMENTS 05–18–22
REVISED PARCEL ID OF SUBJECT PROPERTY 03–01–22

KEM-TEC
PROFESSIONAL ENGINEERING, SURVEYING & ENVIRONMENTAL SERVICES
A GROUP OF COMPANIES

Eastpointe	Detroit	Ann Arbor	Grand Blanc
(800) 295.7222	(313) 758.0677	(734) 994.0888	(888) 694.0001
FAX: (586) 772.4048	FAX: (586) 772.4048	FAX: (734) 994.0667	FAX: (810) 694.9955

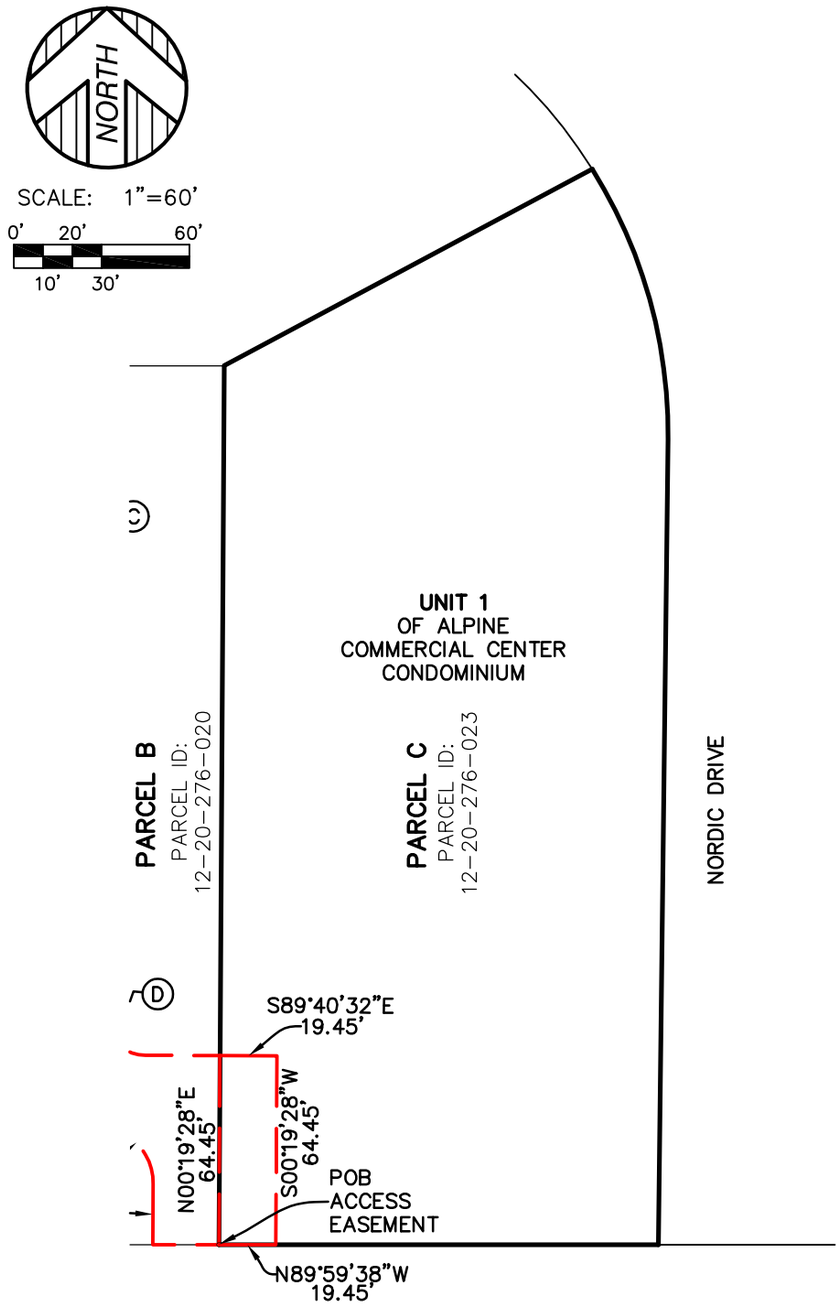
www.kemtecagroupofcompanies.com

PREPARED FOR: DORTCH ENTERPRISES	
FIELD SURVEY: N/A	DATE: FEBRUARY 09, 2022
DRAWN BY: MRJ	SHEET: 2 OF 2
SCALE: N/A	JOB NO.: 20–03619

EXHIBIT C

PROPERTY DESCRIPTION:
SEE SHEET 2 OF 2.

EASEMENT DESCRIPTION:
SEE SHEET 2 OF 2.



LINE TABLE

	BEARING	DISTANCE
1	N00°31'08"E	198.92'
2	N89°58'09"E	519.78'
3	S87°30'16"E	513.36'
4	S84°42'00"E	435.29'

CURVE TABLE

	LENGTH	RADIUS	ChL	ChB
A	28.28'	5821.58'	28.28'	S84°52'11"E

REVISED PER REVIEW COMMENTS 05-18-22

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www.kemtecagroupofcompanies.com

PREPARED FOR: DORTCH ENTERPRISES	
FIELD SURVEY: N/A	DATE: FEBRUARY 09, 2022
DRAWN BY: MRJ	SHEET: 1 OF 2
SCALE: 1" = 60'	JOB NO.: 20-03619

EXHIBIT C

PROPERTY DESCRIPTION PARCEL ID: 12-20-276-023

LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS UNIT 1 OF ALPINE COMMERCIAL CENTER CONDOMINIUM.

ACCESS EASEMENT DESCRIPTION:

LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION 20; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH–SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 256.53 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 86 DEGREES 00 MINUTES 13 SECONDS EAST, 256.51 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST 36.43 FEET; THENCE SOUTH 89 DEGREES 59 MINUTES 38 SECONDS EAST 199.92 FEET TO A POINT ON THE WEST LINE OF PARCEL C, SAID POINT ALSO BEING THE POINT OF BEGINNING OF AN ACCESS EASEMENT; THENCE NORTH 00 DEGREES 19 MINUTES 28 SECONDS EAST ALONG THE WEST LINE OF PARCEL C, 64.56 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST 19.45 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST 64.45 FEET TO A POINT ON THE SOUTH LINE OF PARCEL C; THENCE NORTH 89 DEGREES 59 MINUTES 38 SECONDS WEST ALONG THE SOUTH LINE OF PARCEL C, 19.45 FEET TO THE POINT OF BEGINNING.

REVISED PER REVIEW COMMENTS 05–18–22

KEM-TEC
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www.kemtecagroupofcompanies.com

PREPARED FOR: DORTCH ENTERPRISES	
FIELD SURVEY: N/A	DATE: FEBRUARY 09, 2022
DRAWN BY: MRJ	SHEET: 2 OF 2
SCALE: N/A	JOB NO.: 20–03619

NONEXCLUSIVE STORM WATER DISCHARGE AGREEMENT

THIS STORM WATER DISCHARGE AGREEMENT ("Agreement") is made this 17 day of February, 2022, by and between **MEIJER, INC.**, a Michigan corporation, of 2929 Walker Avenue N.W., Grand Rapids, Michigan 49544, Attention: Real Estate Department, hereinafter referred to as "Meijer," and **GREAT LAKES TACO LLC,** a Michigan limited liability company, whose address is 8487 Retreat Drive, Grand Blanc, Michigan 48439, hereinafter referred to as "Developer." Meijer and Developer are together hereinafter referred to as the "Parties."

RECITALS

A. Pursuant to a certain Real Estate Option Contract executed by and between the Parties (with Meijer as Seller and Developer as Buyer), Developer is or is about to become the fee simple owner of a certain parcel of land located in the Township of White Lake, Oakland County, Michigan. Said parcel of land is located on Highland Road (M-59), and is hereinafter referred to as the "Developer Parcel." The Developer Parcel contains approximately 1.068 acres of land and is legally described on the attached **Exhibit A.**

B. Meijer or an affiliated entity is the fee simple owner of a certain parcel of land located in the Township of White Lake, Oakland County, Michigan, which parcel of land is hereinafter referred to as the "Meijer Parcel." The Meijer Parcel contains approximately 67 acres of land and is located on the north side of Highland Road (M-59) west of Bogie Lake Road in White Lake Township. The Meijer Parcel is legally described on the attached **Exhibit B.**

C. The Meijer Parcel and the Developer Parcel adjoin one another. The Developer Parcel is bordered on its western and northern boundary lines by the Meijer Parcel.

D. Meijer has previously constructed a storm water system consisting of catch basins, storm water lines and related facilities, and a detention pond to provide drainage and detention of storm water generated on the Meijer Parcel, hereinafter referred to as the "Storm Water System." Developer has requested that it be permitted to discharge storm water from the Developer Parcel into the Storm Water System.

E. Meijer has agreed to grant Developer certain storm water discharge rights for the purpose of permitting the discharge of storm water from the Developer Parcel into the Storm Water System at the point approximately located on **Exhibit C** attached hereto (hereinafter the "Discharge Point") in accordance with the terms of this Agreement.

F. This easement is exempt from real estate transfer taxes pursuant to MCLA §207.505(a), and §207.526 (a), being a transfer where the value of the consideration is less than $100.

NOW, THEREFORE, in consideration of the foregoing Recitals, the execution of this Agreement by the Parties hereto, the mutual covenants and agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties hereto, it is agreed as follows:

1. Grant of Discharge Rights. Subject to Developer obtaining all necessary governmental approvals for such discharge into the Storm Water System, Meijer hereby grants to Developer (for the benefit of the Developer Parcel) the right to discharge storm water (free of debris or hazardous or regulated substances) from the Developer Parcel into the Storm Water System, as it may be configured from time to time, at the Discharge Point, at a rate not to exceed the predevelopment rate of flow for the Developer Parcel.

2. Encumbrances. The rights granted to Developer are made subject to all covenants, conditions, restrictions, encumbrances, and easements of record. Developer acknowledges that Meijer may grant other easements and encumbrances over and across the area of the Storm Water System that do not interfere with Developer's discharge rights herein granted.

3. Reservation of Rights. Meijer hereby reserves for itself, its successors and assigns, the right to use the area of the Storm Water System for any purpose which does not limit Developer's discharge rights herein granted.

4. Review of Plans. Developer shall not commence discharge of storm water into the Storm Water System until such time as Meijer is provided with, and has the opportunity to review, all engineering drawings, plans, specifications and other information as Meijer may reasonably require, including storm calculations, a site grading plan and evidence of approval of such discharge/drainage from the applicable governmental authorities. Meijer shall not unreasonably delay or withhold its approval of such plans, drawings and specifications. Provided, however, any modification to the terms of this Agreement, including but not limited to the maximum rate of flow stated in Paragraph 1 may not be amended by a plan approval and may only be modified by an amendment to this Agreement.

Developer acknowledges that Meijer shall not have an obligation to review such submittal and shall not be liable in damages or otherwise for any reason, including any mistake in judgment, negligence or nonfeasance, arising out of or in connection with the approval or disapproval or failure to approve or disapprove or failure to review any proposal submitted pursuant to this Agreement. No approval shall be considered an approval of the plans, drawings and/or specifications from an engineering perspective or a determination that they meet building, environmental or engineering design standards, are in compliance with applicable covenants or governmental requirements, or that any improvements contemplated therein have been built in accordance with such plans, drawings and/or specifications.

5. Maintenance; Manner of Work. Meijer shall maintain the Storm Water System in good order, appearance and repair in full compliance with all applicable laws and regulations and in such a manner to minimize any interference with the Developer Parcel. Notwithstanding the foregoing, Developer shall be responsible maintaining the Discharge Points in good order, appearance and repair in full compliance with all applicable laws and regulations and for the construction of any improvements /modifications to the Storm Water System required by the applicable governmental authorities arising out of the development of the Developer Parcel, subject to Meijer's review and approval of all plans and specifications associated with such work. Any such construction shall be completed by Developer in connection with its development of the Developer Parcel. Such construction (including the preparation of plans and calculations) shall be performed at the sole cost and expense of Developer, and Meijer shall not be obligated to pay for any of such work.

Meijer and Developer agree that to the extent that any party must enter upon the property of any other party in order to perform any right or obligation hereunder, the owner of such property hereby grants the party a license to enter and perform such right or obligation.

6. Payment of Annual Maintenance Fee by Fee Owner of Developer Parcel. In exchange for Meijer's agreement to maintain the Storm Water System as provided herein, Developer agrees to pay Meijer a maintenance fee (the "Maintenance Fee"), by January 15 of each year to cover costs for the calendar year in which the Maintenance Fee is paid. The obligation to pay the Maintenance Fee shall be a covenant that runs with the Developer Parcel. The 2022 calendar year Maintenance Fee shall be One Thousand Five Hundred Dollars ($1,500.00) and shall be prorated and paid upon execution of this Agreement. The Maintenance Fee shall be increased by fifteen percent (15%) every five (5) years. In addition, with respect to any modification or upgrade to the Storm Water System required by the applicable governmental authorities (other than upgrades or modifications specified in Paragraph 4(a) above), Developer agrees to reimburse Meijer five percent (5%) of all documented costs associated with such upgrade/modification. Payment shall be made to the order of Meijer. Failure to provide payment to Meijer within ten (10) days after receipt of written notice from Meijer of Developer's failure to pay shall be deemed a material breach of this Agreement.

(a) If Developer fails to pay Meijer the Maintenance Fee within the specified time period, (a) Developer shall be responsible for interest on such amount computed at the rate of the smaller of (i) eight (8%) percent per annum and (ii) the highest interest rate allowed by law, calculated monthly, from the date of any such claim by Meijer to the date of payment; (b) Meijer shall be entitled to pursue whatever remedies it may have in law or equity; and (c) Meijer shall have the right to file a lien against the Developer Parcel in the amount of the claim. Any such lien shall be considered to be akin to a mortgage lien and Meijer may foreclose upon it in the same manner as a mortgage lien. In no event shall any lien filed under this paragraph be superior to any lien of any construction mortgage utilized to facilitate the initial development of the Developer Parcel from its current status as a vacant parcel and recorded in the real property records for the Developer Parcel prior to the date Developer has completed such initial development. The provisions and requirements of the Michigan Construction Lien Act shall not apply to this lien.

7. Developer's Insurance Requirements. At all times during the term of this Agreement, Developer shall purchase and maintain the following insurance coverages: (i) Commercial General Liability including premises/operations, independent contractors, broad form property damage, personal/advertising injury, blanket contractual liability, fire and explosion legal liability, explosion/collapse/and underground hazard coverage, and products/completed operations coverage in an amount not less than Three Million Dollars ($3,000,000) per occurrence; such policy shall be an occurrence policy and not a claims-made policy. Meijer, Inc., Meijer Stores Limited Partnership and their affiliated entities must be named as an additional insured on an endorsement acceptable to Meijer, at no cost to Meijer. The additional insured endorsement shall extend coverage to the contractual liability and completed operations coverage. A copy of the additional insured endorsement is required. Developer acknowledges that Meijer may elect to increase the required coverage amount not more than once every ten years in order to continue coverage amounts consistent with Meijer's standards at such time. (ii) Automobile Liability including contractual liability coverage for all owned, hired and non-owned vehicles with a combined single limit not less than One Million Dollars single limit. (iii) Workers' Compensation coverage for its employees or contractors with statutory limits; such policy shall include an Alternate Employer endorsement. (iv) Employers' Liability coverage with limits of Five Hundred Thousand Dollars ($500,000.00). Evidence of all insurance required shall be promptly sent to the Risk Management Department, P.O. Box 3280, Grand Rapids, Michigan 49501-3280. Insurance policies shall afford primary coverage and contain a provision that the coverages afforded shall not be modified or canceled until at least ten (10) days prior written notice has been given to the Meijer Risk Management Department. All required insurance policies shall be underwritten by an insurance carrier with an A.M. Best rating of an A- or better. Compliance by Developer with the requirements in this Paragraph 7 (Developer's Insurance Requirements) as to carrying insurance and furnishing proof thereof to Meijer shall not relieve Developer of its indemnity obligations under Paragraph 9 (Indemnification). Indemnity obligations in this Agreement shall not be negated or reduced by virtue of any insurance carrier's (i) denial of insurance coverage for the occurrence or event which is the subject matter of the claim; or (ii) refusal to defend any named insured. Failure to comply with all insurance requirements shall be deemed a material breach of this Agreement. However, failure to provide evidence of existing insurance shall constitute a material breach only if Developer fails to provide such evidence within ten (10) days after written notice from Meijer that Developer has failed to provide the evidence of existing insurance.

8. Insurance Requirements for Developer's Contractors and Subcontractors. Prior to commencing any work on the Meijer Parcel, Developer shall cause its contractor(s) and subcontractor(s) to procure and keep in effect, during the course of their work in, on or about the Meijer's Parcel, the following insurance coverages:

(a) Commercial General Liability including premises/operations, independent contractors, broad form property damage, personal/advertising injury, blanket contractual liability, fire and explosion legal liability, explosion/collapse/and underground hazard coverage, and products/completed operations coverage in an amount not less than Three Million Dollars ($3,000,000) per occurrence; such policy shall be an occurrence policy and not a claims-made policy. Meijer, Inc., Meijer Stores Limited Partnership, and their affiliated entities must be named as an additional insured on an endorsement acceptable to Meijer, at no cost to Meijer. The additional insured endorsement shall extend coverage to the contractual liability and completed operations

coverage. A copy of the additional insured endorsement is required. Developer acknowledges that Meijer may elect to increase the required coverage amount not more than once every ten years in order to continue coverage amounts consistent with Meijer's standards at such time.

(b) Automobile Liability including contractual liability coverage for all owned, hired and non-owned vehicles with a combined single limit not less than One Million Dollars single limit.

(c) Workers' Compensation coverage for its employees or contractors with statutory limits; such policy shall include an Alternate Employer endorsement.

(d) Employer's Liability coverage with limits of Five Hundred Thousand Dollars ($500,000).

Evidence of all insurance required shall be promptly sent to the Risk Management Department, P.O. Box 3280, Grand Rapids, MI 49501-3280. Insurance policies shall afford primary coverage and contain a provision that coverages afforded shall not be modified or canceled until at least ten (10) days prior written notice has been given to the Meijer Risk Management Department; All required insurance policies shall be underwritten by an insurance carrier with an A.M. Best rating of an A- or better.

Notwithstanding anything to the contrary in the foregoing, Meijer shall not be responsible for verifying compliance by any contractor and/or subcontractor with the foregoing insurance requirements. Rather, it shall be Developer's sole responsibility to monitor compliance by any of its contractors and/or subcontractors with the foregoing insurance requirements. However, failure to provide evidence of existing insurance shall constitute a material breach only if Developer fails to provide such evidence within ten (10) days after written notice from Meijer that Developer has failed to provide the evidence of existing insurance.

9. Indemnification. Developer agrees to defend, indemnify and save harmless Meijer, its direct and indirect parent, subsidiaries and affiliated entities and their respective officers, directors, shareholders, agents and employees (hereafter collectively "Related Parties"), from and against any and all liability or claim thereof (including but not limited to reasonable actual attorney fees and costs) whether for injury to persons, including death, or damage to property, which may be imposed upon, incurred by or asserted against Meijer or its Related Parties: (i) allegedly or actually arising in connection with or as a direct or indirect result of any activity by Developer, its employees, agents, contractors, subcontractors, lessees, invitees, or licensees in, on, or about Meijer Parcel including use of the Storm Water System; (ii) arising out of any default by Developer under this Agreement; or (iii) arising out of any negligent act or omission to act by Developer, its agents, employees, contractors or subcontractors. The foregoing indemnity from Developer shall to the extent permitted by law include claims alleging or involving joint or comparative negligence, but shall not extend to liability directly resulting only from the sole negligence of Meijer or its Related Parties. Developer agrees to give Meijer the right to approve or select counsel for defending Meijer against any and all claims, liability and damages covered by this indemnity provision.

10. Covenants Running with the Land. The rights herein granted and the agreements herein contained shall be rights and covenants running with the land and shall inure to the benefit of, and be binding upon, the Parties hereto and their respective successors and assigns.

11. Notices. Notices permitted or required hereunder shall be in writing and shall be delivered or sent by certified mail or overnight delivery by a reputable national carrier to the addresses provided below, (except however, insurance certificates are to be mailed as provided in Paragraphs 7 and 8 above) provided that any party may change such address by written notice to the other party:

If to Developer	Great Lakes Taco LLC 8487 Retreat Drive Grand Blanc, Michigan 48439 Attention: Louis C. Dortch, Jr.
With a copy to:	George F. Rizik, II Rizik & Rizik 9400 South Saginaw Street, Suite E Grand Blanc, Michigan 48439
If to Meijer	Meijer Real Estate Department 2929 Walker NW Grand Rapids, Michigan 49544
with a copy to:	Meijer Legal Department 2929 Walker NW Grand Rapids, Michigan 49544

12. Governing Laws. This Agreement shall be construed in accordance with the laws of the State of Michigan and any applicable federal laws and regulations.

13. Waiver of Default. No waiver of any default by any party to this Agreement shall be implied from any omission by any other party to take any action in respect of such default. No express waiver of any default shall affect any default or cover any period of time other than the default and period of time specified in such express waiver. One or more waivers of any default in the performance of any term, provision or covenant contained in this Agreement shall not be deemed to be a waiver of any subsequent default in the performance of the same term, provision or covenant or any other term, provision or covenant contained in this Agreement. The rights and remedies given to any party to this Agreement shall be deemed to be cumulative and no one of such rights and remedies shall be exclusive of any of the others, or of any other right or remedy at law or in equity which any such party might otherwise have by virtue of a default under this Agreement, and the exercise of one such right or remedy by any such party shall not impair such party's standing to exercise any other right or remedy.

14. Exhibits. All exhibits referred to herein and attached hereto shall be deemed part of this Agreement.

15. Severability. If any term, provision or condition contained in this Agreement shall, to any extent, be invalid or unenforceable, the remainder of this Agreement (or the application of such term, provision or condition to persons or circumstances other than those in respect of which it is invalid or unenforceable) shall not be affected thereby, and each term, provision or condition of this Agreement shall be valid and enforceable to the fullest extent permitted by law provided that such deletions can be made without materially changing the basic agreement between the parties. If such deletions cannot be made without materially changing the basic agreement between the parties, then the parties agree to amend, or to permit the court to amend, this Agreement to accomplish essentially the same transaction without said illegal, invalid or unenforceable provisions.

16. Not a Public Dedication. Nothing herein contained shall be deemed to be a gift or dedication of any portion of the Meijer Parcel to the general public or for the general public or for any public purpose whatsoever, it being the intentions of the parties hereto that this Agreement be strictly limited to and for the purposes herein expressed.

17. Attorney's Fees. If litigation arises out of or in connection with this Agreement, the prevailing party shall be entitled to recover its attorney's fees

18. Counterparts. This Agreement may be executed by the Parties on any number of separate counterparts and all such counterparts so executed constitute one agreement binding on the Parties, notwithstanding that all Parties are not signatories to the same counterpart.

[The remainder of this page was intentionally left blank.]

IN WITNESS WHEREOF, the parties have executed this Nonexclusive Storm Water Discharge Agreement as of the day and year first above written.

MEIJER, INC.

By: _____
Michael Flickinger
Its: Vice President-Real Estate

Legal AM
Bus. ML
Bus. KA

STATE OF MICHIGAN)
) ss.
COUNTY OF KENT)

The foregoing instrument was acknowledged before me this 15TH day of February, 2022, by Michael Flickinger, the Vice President-Real Estate of Meijer, Inc., a Michigan corporation, for and on behalf of said corporation.

_____
Notary Public
State of Michigan, County of Ottawa
My commission expires: 2-17-23
Acting in the County of Kent.

LARAE B STEIGENGA
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF OTTAWA
My Commission Expires February 17, 2023
Acting in Kent County, MI

(Signatures continue on following page)

GREAT LAKES TACO LLC

By: _____

Printed Name: Louis C Dortch Jr

Its: CEO

STATE OF Michigan)
) ss.
COUNTY OF Genesee)

The foregoing instrument was acknowledged before me this 14 day of February, 2022, by Louis C Dortch Jr, the CEO of Great Lakes Taco LLC, a Michigan limited liability company, for and on behalf said limited liability company.

ANGELA KULZA
NOTARY PUBLIC, STATE OF MI
COUNTY OF GENESEE
MY COMMISSION EXPIRES May 22, 2022
ACTING IN COUNTY OF Genesee

_____
Notary Public
State of Michigan County of Genesee.
My commission expires: May 22, 2022
Acting in the County of Genesee.

DRAFTED BY AND
WHEN RECORDED RETURN TO:
Aaron Morrissey, Atty.
2929 Walker Avenue, N.W.
Grand Rapids, MI 49544
(616) 791-3002

EXHIBIT A
TO
NONEXCLUSIVE STORM WATER DISCHARGE AGREEMENT

Legal Description of Developer Parcel

LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH-SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 118.86 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 85 DEGREES 18 MINUTES 14 SECONDS EAST, 118.86 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00 DEGREES 01 MINUTE 09 SECONDS WEST, 236.61 FEET; THENCE 94.59 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 533.50 FEET, CHORD BEARING AND DISTANCE OF NORTH 05 DEGREES 00 MINUTES 27 SECONDS WEST, 94.46 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST, 147.67 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST, 338.00 FEET; THENCE 137.67 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF NORTH 86 DEGREES 36 MINUTES 27 SECONDS WEST, 137.67 FEET TO THE POINT OF BEGINNING.

Part of Tax Parcel Number: 12-20-276-036 (formerly part of 12-20-276-033)

EXHIBIT B
TO
NONEXCLUSIVE STORM WATER DISCHARGE AGREEMENT

Legal Description of the Meijer Parcel

A PART OF THE NORTH 1/2 OF SECTION 20, T3N-R8E, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS BEGINNING AT THE INTERSECTION OF THE NORTH-SOUTH 1/4 LINE OF SAID SECTION 20 WITH THE NORTHERLY RIGHT-OF-WAY LINE OF HIGHLAND ROAD (M-59) WHICH IS N00°31'08"E, 198.92 FEET FROM THE CENTER OF SAID SECTION 20; THENCE FROM SAID POINT OF BEGINNING S89°58'09"W ALONG SAID RIGHT-OF-WAY LINE, 662.41 FEET; THENCE N00°10'23"W, 164.03 FEET; THENCE N00°26'47"E, 1235.97 FEET; THENCE S89°58'09"E, 665.95 FEET TO SAID NORTH-SOUTH 1/4 LINE OF SECTION 20; THENCE N00°31'08"E ALONG SAID LINE, 420.30 FEET; THENCE N89°55'00"E, 867.22 FEET; THENCE S08°28'00"W ALONG THE WESTERLY LINE OF A DETROIT EDISON PARCEL, 480.02 FEET; THENCE CONTINUING ALONG SAID WESTERLY LINE S00°39'06"W, 1353.01 FEET TO SAID NORTHERLY RIGHT-OF-WAY LINE OF HIGHLAND ROAD; THENCE ALONG SAID RIGHT-OF-WAY LINE ON A CURVE TO THE LEFT WITH A RADIUS OF 5821.58 FEET, A CENTRAL ANGLE OF 02°44'10" AND A LONG CHORD BEARING AND DISTANCE OF N88°39'46"W, 277.97 FEET; THENCE CONTINUING ALONG SAID RIGHT-OF-WAY LINE S89°58'09'W, 519.78 FEET TO THE POINT OF BEGINNING; CONTAINING 55.1685 GROSS AND NET ACRES.

EXCEPTING THEREFROM THE FOLLOWING PARCEL:

A part of the Northeast ¼ of Section 20, T3N-R8E, White Lake Township, Oakland County, Michigan, described as beginning at a point which is N00°31'08"E along the North-South ¼ line of said Section 20, 198.92 feet and N89°58'09"E along the northerly right-of-way line of Highland Road (M-59), 519.78 feet and continuing along said right-of-way line along a curve to the right with a radius of 5821.58 feet, a central angle of 02°44'10" and a long chord bearing and distance of S88°39'46"E, 277.97 feet and N00°39'06"E along the westerly line of Detroit Edison Parcel, 1353.01 feet and N08°28'00"E along said westerly line, 277.77 feet from the center of said Section 20; thence from said Point of Beginning S89°55'06"W, 172.18 feet; thence N00°04'59"W, 200.00 feet; thence N89°55'00"E, 202.25 feet; thence S08°28'00"W, along said westerly line, 202.25 feet to the Point of Beginning; containing 0.860 gross and net acre.

TOGETHER WITH:

Commencing at the Center Post of Section 20, T3N, R8E, White Lake Township, Oakland County, Michigan; said point being S89°59'45"W 2635.27 feet from the East 1/4 corner of said Section 20; thence N00°31'08"E 198.92 feet along the North-South 1/4 line of said Section 20; thence N89°58'09"E 519.78 feet along the Northerly right-of-way line of M-59 (Highland Road, variable width); thence 513.36 feet along the arc of a 5821.58 foot radius circular curve to the right, chord bearing S87°30'16"E 513.20 feet along the Northerly right-of-way line of said M-59 for a **PLACE OF BEGINNING**; thence N00°39'06"E 981.32 feet; thence N90°00'00"E 156.11 feet (recorded as 156.53 feet); thence N63°45'10"E 76.30 feet; thence N83°08'44"E 68.91 feet; thence S73°02'19"E

100.53 feet; thence S50°34'37"E 136.92 feet; thence S50°09'11"E 120.23 feet (recorded as 120.32 feet); thence S50°21'46"E 66.40 feet; thence S32°53'46"E 42.85 feet; thence N90°00'00"E 49.43 feet (recorded as 49.01 feet); thence S00°19'28"W 812.21 feet; thence 256.53 feet along the arc of a 5637.58 foot radius circular curve to the right, chord bearing N86°00'13"W 256.51 feet along the Northerly right-of-way line of said M-59; thence N84°42'00"W 51.36 feet along the Northerly right-of-way line of said M-59; thence N01°30'56"E 30.03 feet; thence S88°29'04"E 63.50 feet; thence N03°10'30"W 150.32 feet; thence 234.17 feet along the arc of a 966.50 foot radius circular curve to the left, chord bearing N19°25'09"W 233.59 feet; thence S60°22'37"W 36.86 feet; thence 120.47 feet along the arc of a 233.00 foot radius circular curve to the right, chord bearing S75°11'17"W 119.13 feet; thence S90°00'00"W 15.98 feet; thence S01°30'56"W 332.20 feet; thence N84°42'00"W 189.40 feet along the Northerly right-of-way line of said M-59; thence 28.38 feet (recorded as 28.28 feet) along the arc of a 5821.58 foot radius circular curve to the left, chord bearing N84°52'11"W 28.38 feet (recorded as N84°50'21" 28.28 feet) along the Northerly right-of-way line of said M-59 to the Place of Beginning, containing 14.017 acres of land, more or less, being subject to easements, conditions, restrictions and exceptions of record, if any.

EXCEPTING THEREFROM:

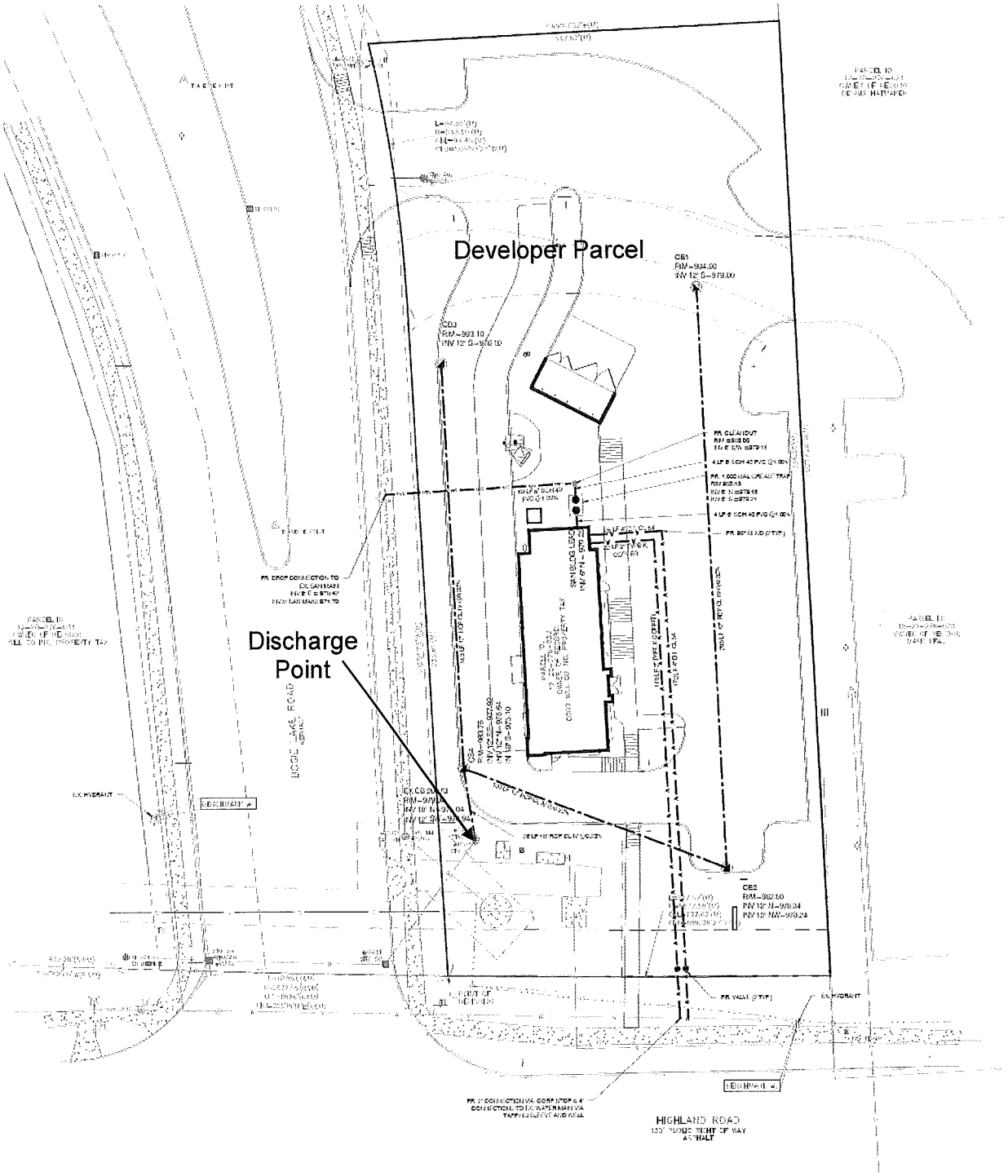
LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH-SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 118.86 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 85 DEGREES 18 MINUTES 14 SECONDS EAST, 118.86 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00 DEGREES 01 MINUTE 09 SECONDS WEST, 236.61 FEET; THENCE 94.59 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 533.50 FEET, CHORD BEARING AND DISTANCE OF NORTH 05 DEGREES 00 MINUTES 27 SECONDS WEST, 94.46 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST, 147.67 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST, 338.00 FEET; THENCE 137.67 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF NORTH 86 DEGREES 36 MINUTES 27 SECONDS WEST, 137.67 FEET TO THE POINT OF BEGINNING.

Tax Parcel No.: Y-12-20-251-019 and Y-12-20-276-035 (formerly part of 12-20-276-033)
Property Address: 6001 Highland Road, White Lake, Michigan 48383

EXHIBIT C
TO
NONEXCLUSIVE STORM WATER DISCHARGE AGREEMENT

Illustration of the Discharge Point



Catalog #: MRMLED-9L-SIL-FT-UNV-DIM-40-70CRI Project: Great Lakes Taco Bell - White Lake

Prepared By: Date: Type: A1

Mirada Medium (MRM)

Outdoor LED Area Light

OVERVIEW	
Lumen Package	7,000 - 42,000
Wattage Range	53 - 390
Efficacy Range (LPW)	93 - 148
Weight lbs(kg)	30 (13.6)

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Cast aluminum wiring access door located underneath.
- Designed to mount to square or round poles.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 30 lbs in carton.

Optical System

- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W, FT, FTA and AM.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- Zero uplight.
- Available in 5000K, 4000K, and 3000K color temperatures per ANSI C78.377. Also Available in Phosphor Converted Amber with Peak intensity at 610nm.
- Minimum CRI of 70.
- Integral louver (IL) and house-side shield (IH) options available for improved backlight control without sacrificing street side performance. See page 3 for more details.

Electrical

- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours (See Lumen Maintenance on Page 5)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F). 42L lumen package rated to +40ºC.
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

Controls

- Optional integral passive infrared Bluetooth™ motion and photocell sensor (see page 9 for more details). Fixtures operate independently and can be commissioned via iOS or Android configuration app
- LSI's AirLink™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7. (see page 9 for more details.

Installation

- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment.
- Included terminal block accepts up to 12 ga. wire.
- Utilizes LSI's traditional 3" drill pattern B3 for easy fastening of LSI products. (See drawing on page 9)

Warranty

- LSI LED Fixtures carry a 5-year warranty.

Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- IDA compliant; with 3000K color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable for wet Locations.
- IP66 rated Luminaire per IEC 60598. IP66 rated optical chamber.
- 3G rated for ANSI C136.31 high vibration applicationsapplicationsare qualified.

Specifications and dimensions subject to change without notice.

Type: _____

Mirada Medium Outdoor LED Area Light

ORDERING GUIDE

Back to Quick Links

TYPICAL ORDER EXAMPLE: **MRM LED 36L SIL FTA UNV DIM 50 70CRI ALSCS04 BRZ IL**

Luminaire Prefix	Light Source	Lumen Package	Light Output	Distribution	Orientation[1]	Voltage	Driver
MRM - Mirada	**LED**	**7L** - 7,000 lms **9L** - 9,000 lms **12L** - 12,000 lms **18L** - 18,000 lms **24L** - 24,000 lms **30L** - 30,000 lms **36L** - 36,000 lms **42L** - 42,000 lms	**SIL** - Silicone	**2** - Type 2 **3** - Type 3 **5W** - Type 5 Wide **FT** - Forward Throw **FTA** - Forward Throw Automotive **AM** - Automotive Merchandise	**(blank)** - standard **L**- Optics rotated left 90 **R** - Optics rotated right 90	**UNV** - Universal Voltage (120-277V) **HV** - High Voltage (347-480V)	**DIM** - 0-10V Dimming (0-10%)

Color Temp	Color Rendering	Finish	Options
50 - 5,000 CCT **40** - 4,000 CCT **30** - 3,000 CCT[2] **AMB** - Phosphor Converted Amber[2,3]	**70CRI** - 70 CRI	**BRZ** - Bronze **BLK** - Black **GPT** - Graphite **MSV** - Metallic Silver **WHT** - White **PLP** - Platinum Plus **SVG** - Satin Verde Green Finish selected by arch.	**(Blank)** - None **IH** - Integral Houseside Shield[1] **IL** - Integral Louver (Sharp Spill Light Cutoff)[1]

Controls (Choose One)

(Blank) - None

Wireless Controls System
ALSC - AirLink Synapse Control System [4]
ALSCH - AirLink Synapse Control System Host / Satelite[4,5]
ALSCS01 - AirLink Synapse Control System with 8-12' Motion Sensor [4]
ALSCHS01 - AirLink Synapse Control System Host / Satelite with 8-12' Motion Sensor [4,5]
ALSCS02 - AirLink Synapse Control System with 12-20' Motion Sensor[4]
ALSCHS02 - AirLink Synapse Control System Host / Satelite with 12-20' Motion Sensor [4,5]
ALSCS04 - AirLink Synapse Control System with 20-40' Motion Sensor [4]
ALSCHS04 - AirLink Synapse Control System Host / Satelite with 20-40' Motion Sensor [4,5]
ALBCS1 - AirLink Blue Wireless Motion & Photo Sensor Controller (8-24' mounting height)[4]
ALBCS2 - AirLink Blue Wireless Motion & Photo Sensor Controller (25-40' mounting height)[4]

Stand-Alone Controls
EXT - 0-10v Dimming leads extended to housing exterior
CR7P - 7 Pin Control Receptacle ANSI C136.41 [7]
IMSBT1- Integral Bluetooth™ Motion and Photocell Sensor max 8-24' mounting height [4, 6]
IMSBT2- Integral Bluetooth Motion and Photocell Sensor max 25-40' mounting height [4, 6]

Button Type Photocells
PCI120 - 120V
PCI208-277 - 208 -277V
PCI347 - 347V

(Lutron Limelight Controls
LLC – LimeLight Integral Wireless Radio Control by Lutron[4]
LLCS1 – Limelight Integral Wireless Radio Control and PIR Motion/ Daylight Sensor by Lutron 8-15' mt height[4]
LLCS2 – Limelight Integral Wireless Radio Control and PIR Motion/ Daylight Sensor by Lutron 16-30' mt height[4]
LLCS3 – Limelight Integral Wireless Radio Control and PIR Motion/ Daylight Sensor by Lutron 31-40' mt height[4]

Accessory Ordering Information[8]

Controls Accessories

Description	Order Number[10]
Twist Lock Photocell (120V) for use with CR7P	122514
Twist Lock Photocell (208-277) for use with CR7P	122515
Twist Lock Photocell (347V) for use with CR7P	122516
Twist Lock Photocell (480V) for use with CR7P	1225180
AirLink 5 Pin Twist Lock Controller	661409
AirLink 5 Pin Twist Lock Controller	661410
Pole-Mounted Occupancy Sensor (24V)	663284CLR
Shorting Cap for use with CR7P	149328

Mounting Accessories

Description	Order Number[10]
Universal Mounting Bracket	684616CLR
Adjustable Slip Fitter (2" - 2 3/8" Tenon)	688138CLR
Horizontal Slip Fitter (2" - 2 3/8" Tenon)	652761CLR
Quick Mount Pole Bracket (Square Pole)	687073CLR
Quick Mount Pole Bracket (4-5" Round Pole)	689903CLR
15 Tilt Quick Mount Pole Bracket (Square Pole)	688003CLR
15 Tilt Quick Mount Pole Bracket (4-5" Round Pole)	689905CLR
Wall Mount Bracket	382132CLR
Integral Louver/Shield	690981
Internal Houseside Shield	743415

Fusing Accessories[12]

Description	Order Number
Single Fusing (120V)	FK120
Single Fusing (277V)	FK277
Double Fusing (480V)	DFK480
Double Fusing (347V)	DFK347

FOOTNOTES:
1 - Not available on "Type 5W" distribution.
2 - Consult Factory for availability.
3 - Only available in 9L and 12L Lumen Packages
4 - Not available in HV.
5 - Consult Factory for Site Layout
6 - IMSBT is field configurable via the LSI app that can be downloaded from your smartphone's native app store
7 - Control device or shorting cap must be ordered separately. See Accessory Ordering Information.
8 - Accessories are shipped separately and field installed.
9 - Factory installed CR7P option required. See Options.
10 - "CLR" denotes finish. See Finish options.
11 - Not available in UNV.
12 - Fusing must be located in hand hole of pole.

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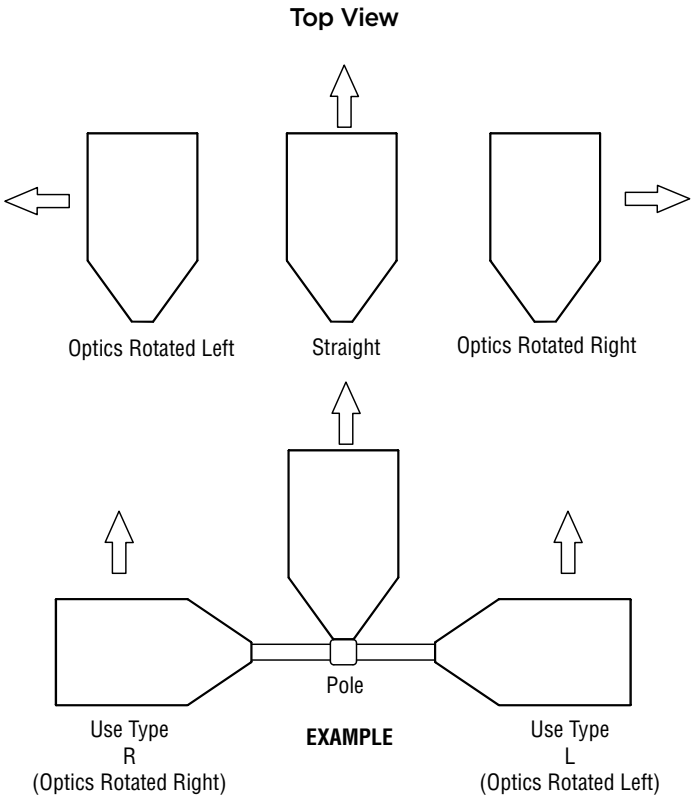
Mirada Medium Outdoor LED Area Light

OPTICS ROTATION

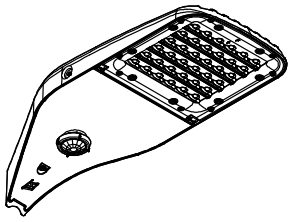


ACCESSORIES/OPTIONS

Integral Louver (IL) and House-Side Shield (IH)

Accessory louver and shield available for improved backlight control without sacrificing street side performance. LSI's Integral Louver (L) and Integral House-Side Shield (IH) options deliver backlight control that significantly reduces spill light behind the poles for applications with pole locations close to adjacent properties. The design maximizes forward reflected light while reducing glare, maintaining the optical distribution selected, and most importantly eliminating light trespass. Both options rotate with the optical distribution.

Luminaire Shown with Integral Louver (IL)

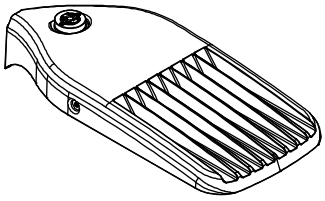


Luminaire Shown with IMSBT Option

7 Pin Photoelectric Control

7-pin ANSI C136.41-2013 control receptacle option available for twist lock photocontrols or wireless control modules. Control accessories sold separately. Dimming leads from the receptacle will be connected to the driver dimming leads (Consult factory for alternate wiring).

Luminaire Shown with PCR 7P



Mirada Medium Outdoor LED Area Light

Back to Quick Links

Delivered Lumens*

Lumen Package	Distribution	CRI	3000K CCT			4000K CCT			5000K CCT			Wattage
			Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	
7L	2	70	6711	127	B2-U0-G1	7208	137	B2-U0-G2	7596	144	B2-U0-G2	53
	3		6889	130	B1-U0-G2	7400	140	B1-U0-G2	7798	148	B1-U0-G2	
	5W		6557	124	B3-U0-G1	7043	133	B3-U0-G2	7422	141	B3-U0-G2	
	FT		6701	127	B1-U0-G2	7197	136	B1-U0-G2	7584	144	B2-U0-G2	
	FTA		6799	129	B2-U0-G1	7303	138	B2-U0-G1	7696	146	B2-U0-G1	
	AM		7225	136	B1-U0-G1	7922	149	B2-U0-G1	8239	155	B2-U0-G1	
9L	2	70	8576	125	B2-U0-G2	9396	137	B2-U0-G2	9784	143	B2-U0-G2	68
	3		8804	129	B1-U0-G2	9646	141	B2-U0-G2	10044	147	B2-U0-G2	
	5W		8380	122	B3-U0-G2	9181	134	B3-U0-G2	9560	140	B3-U0-G2	
	FT		8563	125	B2-U0-G2	9382	137	B2-U0-G2	9769	143	B2-U0-G2	
	FTA		8689	127	B2-U0-G2	9520	139	B2-U0-G2	9913	145	B2-U0-G2	
	AM		9432	137	B2-U0-G1	10342	150	B2-U0-G2	10755	156	B2-U0-G2	
12L	2	70	11461	122	B2-U0-G2	12556	134	B3-U0-G2	13075	139	B3-U0-G2	93
	3		11766	125	B2-U0-G2	12890	137	B2-U0-G2	13423	143	B2-U0-G2	
	5W		11199	119	B4-U0-G2	12269	131	B4-U0-G2	12775	136	B4-U0-G2	
	FT		11444	122	B2-U0-G2	12538	133	B2-U0-G3	13055	139	B2-U0-G3	
	FTA		11612	124	B2-U0-G2	12722	135	B2-U0-G2	13247	141	B2-U0-G2	
	AM		12582	134	B2-U0-G2	13796	147	B2-U0-G2	14348	153	B2-U0-G2	
18L	2	70	17168	115	B3-U0-G3	18809	126	B3-U0-G3	19586	131	B3-U0-G3	149
	3		17625	118	B2-U0-G3	19310	129	B3-U0-G3	20107	134	B3-U0-G3	
	5W		16776	112	B4-U0-G2	18379	123	B4-U0-G2	19138	128	B5-U0-G3	
	FT		17143	115	B3-U0-G3	18781	126	B3-U0-G4	19557	131	B3-U0-G4	
	FTA		17395	116	B3-U0-G3	19058	127	B3-U0-G3	19844	133	B3-U0-G3	
	AM		18863	127	B3-U0-G2	20683	149	B3-U0-G2	21511	149	B3-U0-G2	
24L	2	70	22701	121	B4-U0-G3	24276	130	B4-U0-G3	24784	133	B4-U0-G3	189
	3		23636	126	B3-U0-G4	25275	135	B3-U0-G4	25804	138	B3-U0-G4	
	5W		22432	120	B5-U0-G3	23988	128	B5-U0-G3	24490	131	B5-U0-G3	
	FT		23496	126	B3-U0-G4	25126	134	B3-U0-G4	25652	137	B3-U0-G4	
	FTA		23371	125	B3-U0-G3	24992	134	B3-U0-G3	25515	136	B3-U0-G3	
	AM		24522	131	B3-U0-G3	26227	140	B3-U0-G3	26751	143	B3-U0-G3	
30L	2	70	28900	117	B4-U0-G3	30905	125	B4-U0-G3	31551	128	B4-U0-G3	249
	3		30089	122	B3-U0-G4	32176	130	B3-U0-G4	32850	133	B3-U0-G4	
	5W		28557	116	B5-U0-G3	30538	124	B5-U0-G4	3117	126	B5-U0-G4	
	FT		29912	121	B3-U0-G4	31987	130	B3-U0-G4	32656	132	B3-U0-G5	
	FTA		29752	120	B4-U0-G3	31816	129	B4-U0-G3	32482	132	B4-U0-G3	
	AM		31061	126	B3-U0-G3	33221	134	B3-U0-G3	33885	137	B3-U0-G3	
36L	2	70	35025	111	B4-U0-G3	37454	118	B4-U0-G3	38238	121	B4-U0-G4	318
	3		36466	115	B3-U0-G5	38996	123	B3-U0-G5	39812	126	B3-U0-G5	
	5W		34609	109	B5-U0-G4	37010	117	B5-U0-G4	37785	119	B5-U0-G4	
	FT		36251	114	B3-U0-G5	38766	122	B4-U0-G5	39557	125	B4-U0-G5	
	FTA		36058	114	B4-U0-G4	38559	122	B4-U0-G4	39366	124	B4-U0-G3	
	AM		37429	118	B3-U0-G3	40030	126	B3-U0-G3	40831	129	B3-U0-G3	

Mirada Medium Outdoor LED Area Light

PERFORMANCE (CONT.)

Delivered Lumens*

Lumen Package	Distribution	CRI	3000K CCT			4000K CCT			5000K CCT			Wattage
			Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	
42L	2	70	3994	103	B5-U0-G4	42768	110	B5-U0-G4	43663	112	B5-U0-G4	393
	3		41640	107	B4-U0-G5	44528	114	B4-U0-G5	45460	117	B4-U0-G5	
	5W		39520	101	B5-U0-G4	42261	108	B5-U0-G4	43145	111	B5-U0-G4	
	FT		41395	106	B4-U0-G5	44266	114	B4-U0-G5	45192	116	B4-U0-G5	
	FTA		41174	106	B4-U0-G4	44030	113	B4-U0-G4	44951	115	B4-U0-G4	
	AM		43021	109	B3-U0-G3	46012	117	B4-U0-G3	46932	119	B4-U0-G3	

ELECTRICAL DATA (AMPS)*

Lumens	Watts	120V	208V	240V	277V	347V	480V
7L	53	0.4A	0.3A	0.2A	0.2A	0.2A	0.1A
9L	69	0.6A	0.3A	0.3A	0.2A	0.2A	0.1A
12L	94	0.8A	0.5A	0.4A	0.3A	0.3A	0.2A
18L	150	1.2A	0.7A	0.6A	0.5A	0.4A	0.3A
24L	187	1.6A	0.9A	0.8A	0.7A	0.5A	0.4A
30L	247	2.1A	1.2A	1.0A	0.9A	0.7A	0.5A
36L	317	2.6A	1.5A	1.3A	1.1A	0.9A	0.7A
42L	390	3.2A	1.9A	1.6A	1.4A	1.1A	0.8A

ELECTRICAL DATA - PHOSPHOR CONVERTED AMBER (AMPS)*

Lumens	Watts	120V	208V	240V	277V	347V	480V
9L	74.3	0.6A	0.4A	0.3A	0.3A	0.2A	0.2A
12L	102.9	0.9A	0.5A	0.4A	0.4A	0.3A	0.2A

*Electrical data at 25°C (77°F). Actual wattage may differ by +/-10%

LUMINAIRE EPA CHART - MRM

Tilt Degree		0°	30°	45°	Tilt Degree		0°	30°	45°
	Single	0.5	1.5	1.9		T90°	1.0	2.5	2.8
	D180°	1.0	1.5	1.9		TN120°	1.0	3.3	3.9
	D90°	0.8	1.9	2.3		Q90°	1.0	2.5	2.8

RECOMMENDED LUMEN MAINTENANCE[1] (7-18L)

Ambient	Intial[2]	25h[2]	50hr[2]	75hr[2]	100hr[2]
0-50 C	100%	96%	92%	88%	84%

RECOMMENDED LUMEN MAINTENANCE[1] (24-42L)

Ambient	Intial[2]	25h[2]	50hr[2]	75hr[2]	100hr[2]
0-40 C	100%	100%	97%	94%	92%

1. Lumen maintenance values at 25C are calculated per TM-21 based on LM-80 data and in-situ testing.
2. In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.
3. In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing.

DELIVERED LUMENS*

Lumen Package	Distribution	Phosphor Converted Amber (Peak 610mm)			Wattage
		Delivered Lumens	Efficacy	BUG Rating	
9L	2	5848	80	B2-U0-G2	74
	2 - IL	3644	50	B0-U0-G1	
	3	6018	82	B1-U0-G2	
	3 - IL	4468	61	B0-U0-G2	
	5W	5471	74	B3-U0-G1	
	FT	5801	79	B1-U0-G2	
	FT - IL	3649	50	B0-U0-G1	
	FTA	5924	81	B1-U0-G1	
	FTA - IL	4243	58	B1-U0-G1	
12L	2	7530	74	B2-U0-G2	102
	2 - IL	4692	46	B0-U0-G1	
	3	7749	76	B1-U0-G2	
	3 - IL	5753	57	B0-U0-G2	
	5W	7045	69	B3-U0-G2	
	FT	7470	73	B2-U0-G2	
	FT - IL	4699	46	B0-U0-G2	
	FTA	7628	75	B2-U0-G2	
	FTA-IL	5464	54	B1-U0-G1	

*LEDs are frequently updated therefore values are nominal.

Mirada Medium Outdoor LED Area Light

PHOTOMETRICS

Back to Quick Links

Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

See http://www.lsi-industries.com/products/led-lighting-solutions.aspx for detailed photometric data.

MRM-LED-30L-SIL-2-40-70CRI

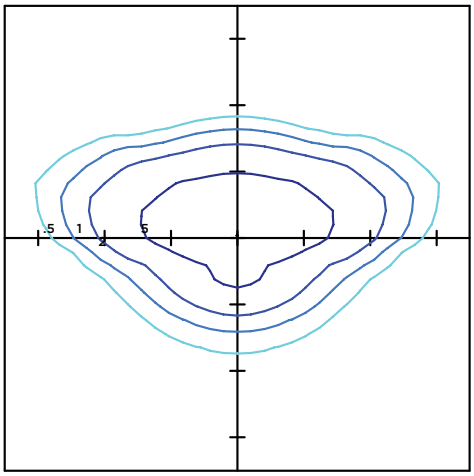
LUMINAIRE DATA

Type 2 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	30,905
Watts	247
Efficacy	125
IES Type	Type II - Short
BUG Rating	B4-U0-G3

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	4392	14%
Medium (30-60)°	18894	61%
High (60-80)°	7359	24%
Very High (80-90)°	260	1%
Uplight (90-180)°	0	0%
Total Flux	30905	100%

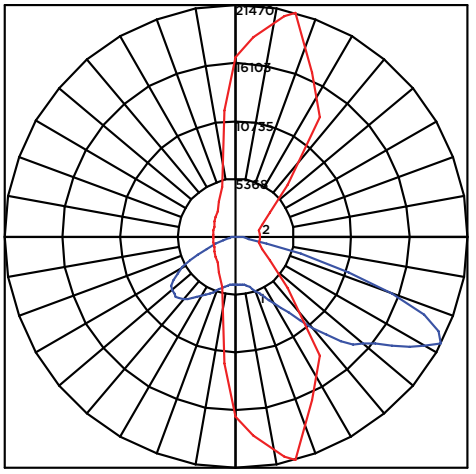
ISO FOOTCANDLE



25' Mounting Height/ 25' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

POLAR CURVE



MRM-LED-30L-SIL-3-40-70CRI

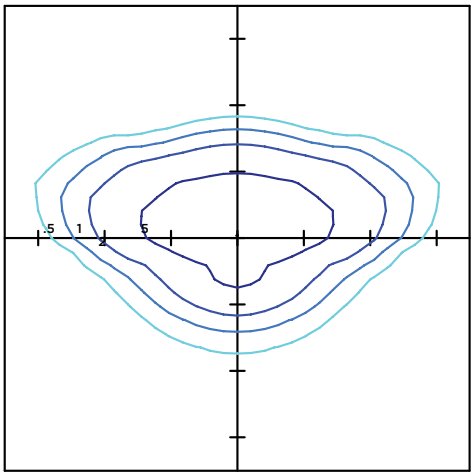
LUMINAIRE DATA

Type 3 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	32,176
Watts	247
Efficacy	130
IES Type	Type III - Short
BUG Rating	B3-U0-G4

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	2970	9%
Medium (30-60)°	16127	50%
High (60-80)°	12779	40%
Very High (80-90)°	301	1%
Uplight (90-180)°	0	0%
Total Flux	32176	100%

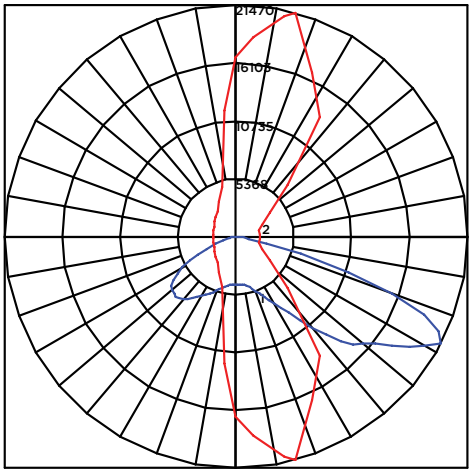
ISO FOOTCANDLE



25' Mounting Height/ 25' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

POLAR CURVE



Mirada Medium Outdoor LED Area Light

PHOTOMETRICS (CONT)

MRM-LED-30L-SIL-FT-40-70CRI

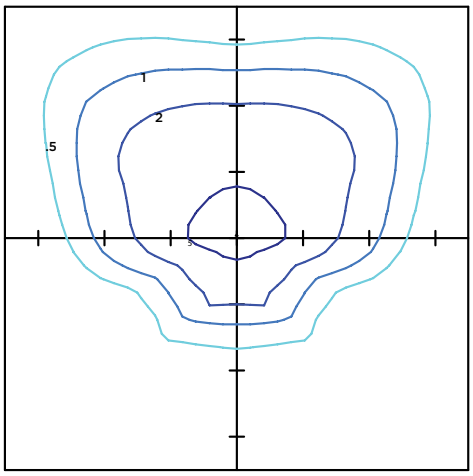
LUMINAIRE DATA

Type FT Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	31,987
Watts	247
Efficacy	130
IES Type	Type IV - Short
BUG Rating	B3-U0-G4

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	4126	13%
Medium (30-60)°	13479	42%
High (60-80)°	13768	43%
Very High (80-90)°	614	2%
Uplight (90-180)°	0	0%
Total Flux	31987	100%

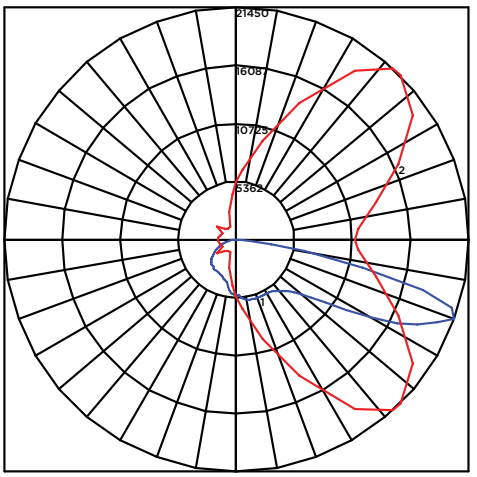
ISO FOOTCANDLE



25’ Mounting Height/ 25’ Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

POLAR CURVE



MRM-LED-30L-SIL-5W-40-70CRI

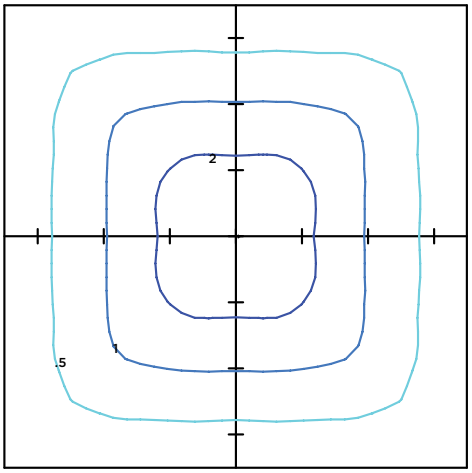
LUMINAIRE DATA

Type 5W Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	30,538
Watts	247
Efficacy	124
IES Type	Type VS - Short
BUG Rating	B5-U0-G4

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	2862	9%
Medium (30-60)°	12032	39%
High (60-80)°	15328	50%
Very High (80-90)°	315	1%
Uplight (90-180)°	0	0%
Total Flux	30538	100%

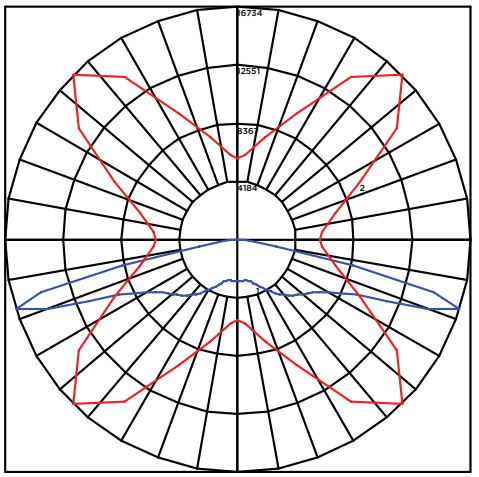
ISO FOOTCANDLE



25’ Mounting Height/ 25’ Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

POLAR CURVE



PHOTOMETRICS (CONT)

MRM-LED-30L-SIL-FTA-40-70CRI

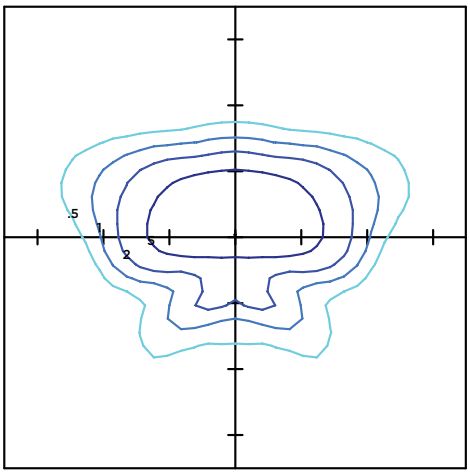
LUMINAIRE DATA

Type FTA Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	31,816
Watts	247
Efficacy	129
IES Type	Type II - Short
BUG Rating	B4-U0-G3

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	6758	21%
Medium (30-60)°	18845	59%
High (60-80)°	5872	18%
Very High (80-90)°	341	1%
Uplight (90-180)°	0	0%
Total Flux	31816	100%

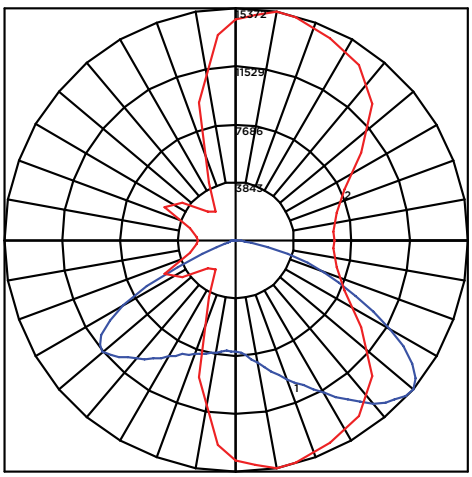
ISO FOOTCANDLE



25’ Mounting Height/ 25’ Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

POLAR CURVE



MRM-LED-30L-SIL-AM-40-70CRI

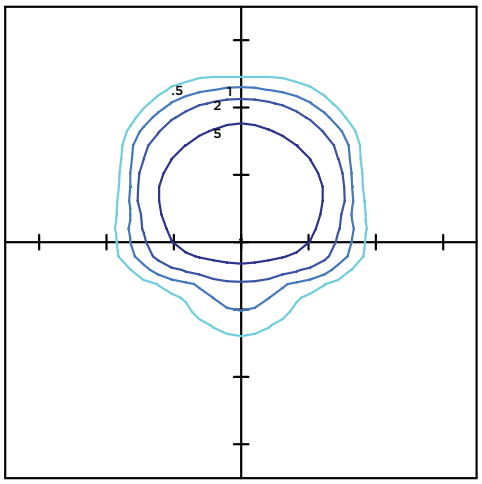
LUMINAIRE DATA

Type AM Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	33,221
Watts	247
Efficacy	134
IES Type	Type III - Very Short
BUG Rating	B3-U0-G3

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	5550	17%
Medium (30-60)°	21354	64%
High (60-80)°	5881	18%
Very High (80-90)°	435	1%
Uplight (90-180)°	0	0%
Total Flux	33221	100%

ISO FOOTCANDLE



25’ Mounting Height/ 25’ Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

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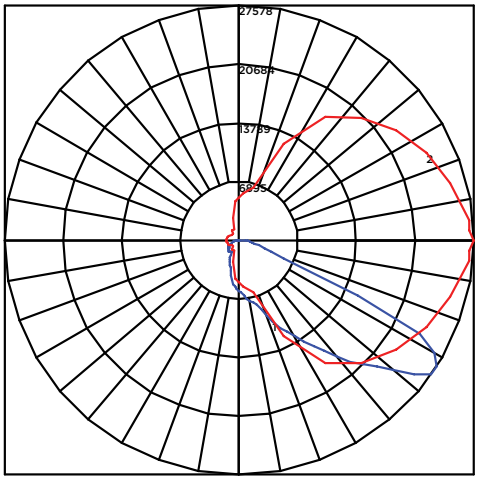

Mirada Medium Outdoor LED Area Light

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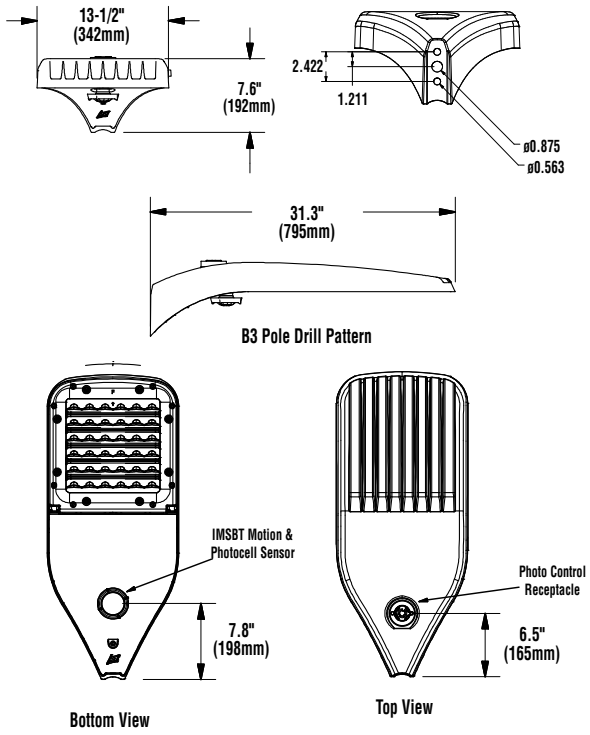
PRODUCT DIMENSIONS



CONTROLS

AirLink Wireless Lighting Controller

The AirLink integrated controller is a California Title 24 compliant lighting controller that provides real-time light monitoring and control with utility-grade power monitoring. It includes a 24V sensor input and power supply to connect a sensor into the outdoor AirLink wireless lighting system. The wireless integrated controller is compatible with this fixture.

Click the link below to learn more details about AirLink.

https://www.lsicorp.com/wp-content/uploads/documents/products/airlink-outdoor-specsheet.pdf

Integral Bluetooth™ Motion and Photocell Sensor (IMSBT)

Slim low profile sensor provides multi-level control based on motion and/or daylight. Sensor controls 0-10 VDC LED drivers and is rated for cold and wet locations (-30° C to 70° C). Two unique PIR lenses are available and used based on fixture mounting height. All control parameters are adjustable via an iOS or Android App capable of storing and transmitting sensor profiles.

Click the link below to learn more details about IMSBT.

https://www.lsicorp.com/wp-content/uploads/documents/products/imsbt-specsheet.pdf

AirLink Blue

Wireless Bluetooth Mesh Outdoor Lighting Control System that provides energy savings, code compliance and enhanced safety/security for parking lots and parking garages. Three key components; Bluetooth wireless radio/sensor controller, Time Keeper and an iOS App. Capable of grouping multiple fixtures and sensors as well as scheduling time-based events by zone. Radio/Sensor Controller is factory integrated into Area/Site, Wall Mounted, Parking Garage and Canopy luminaires.

Click the link below to learn more details about AirLink Blue.

https://www.lsicorp.com/product/airlink-blue/

Mirada Medium Outdoor LED Area Light

POLES & BRACKETS

LSI offers a full line of poles and mounting accessories to complete your lighting assembly. Aluminum and steel in both square and round shafts. In addition, LSI offers round tapered, fluted and hinge based poles. Designed and engineered for durability and protected with our oven baked DuraGrip Protection System. Also available with our DuraGrip+ Protection system for unmatched corrosion resistance and an extended warranty. American made in our Ohio facility with industry leading lead times.

Click the link below to learn more details about poles & brackets.

https://www.lsicorp.com/products/poles-brackets/

BKA UMB CLR

The 3G rated UMB allows for seamless integration of LSI luminaires onto existing/ retrofit or new construction poles. The UMB was designed for square or round (tapered or straight) poles with two mounting hole spacings between 3.5" – 5".

BKA ASF CLR

The adjustable Slip Fitter is a 3G rated rugged die cast aluminum adapter to mount LSI luminaires onto a onto a 2" iron pipe , 2 3/8 OD tenon. The Adjustable Slip Fitter can be rotated 180° allowing for tilting LSI luminaires up to 45° and 90° when using a vertical tenon.

BKS PQM15 CLR

The Pole Quick Mount Bracket allows for preset 15° uptilt of LSI luminaires for greater throw of light and increased vertical illumination as well as fast installation onto poles with LSI's 3" or 5" bolt pattern.

BKS PQMH CLR

The Pole Quick Mount Bracket allows for lightning fast installation of LSI luminaires onto existing and new construction poles with LSI's B3 or B5 standard pole bolt patterns.

Square Pole
14'-39'

Round Pole
10'-30'

Tapered Pole
20'-39'

Catalog #: MRMLED-9L-SIL-FT-UNV-DIM-40-70CRI Project: Great Lakes Taco Bell - White Lake

Prepared By: Date: Type: A1

Mirada Medium (MRM)

Outdoor LED Area Light

OVERVIEW	
Lumen Package	7,000 - 42,000
Wattage Range	53 - 390
Efficacy Range (LPW)	93 - 148
Weight lbs(kg)	30 (13.6)

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Cast aluminum wiring access door located underneath.
- Designed to mount to square or round poles.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 30 lbs in carton.

Optical System

- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W, FT, FTA and AM.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- Zero uplight.
- Available in 5000K, 4000K, and 3000K color temperatures per ANSI C78.377. Also Available in Phosphor Converted Amber with Peak intensity at 610nm.
- Minimum CRI of 70.
- Integral louver (IL) and house-side shield (IH) options available for improved backlight control without sacrificing street side performance. See page 3 for more details.

Electrical

- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours (See Lumen Maintenance on Page 5)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F). 42L lumen package rated to +40ºC.
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

Controls

- Optional integral passive infrared Bluetooth™ motion and photocell sensor (see page 9 for more details). Fixtures operate independently and can be commissioned via iOS or Android configuration app
- LSI's AirLink™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7. (see page 9 for more details.

Installation

- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment.
- Included terminal block accepts up to 12 ga. wire.
- Utilizes LSI's traditional 3" drill pattern B3 for easy fastening of LSI products. (See drawing on page 9)

Warranty

- LSI LED Fixtures carry a 5-year warranty.

Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- IDA compliant; with 3000K color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable for wet Locations.
- IP66 rated Luminaire per IEC 60598. IP66 rated optical chamber.
- 3G rated for ANSI C136.31 high vibration applicationsapplicationsare qualified.

Specifications and dimensions subject to change without notice.

Type: _____

Mirada Medium Outdoor LED Area Light

ORDERING GUIDE

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TYPICAL ORDER EXAMPLE: **MRM LED 36L SIL FTA UNV DIM 50 70CRI ALSCS04 BRZ IL**

Luminaire Prefix	Light Source	Lumen Package	Light Output	Distribution	Orientation[1]	Voltage	Driver
MRM - Mirada	**LED**	**7L** - 7,000 lms **9L** - 9,000 lms **12L** - 12,000 lms **18L** - 18,000 lms **24L** - 24,000 lms **30L** - 30,000 lms **36L** - 36,000 lms **42L** - 42,000 lms	**SIL** - Silicone	**2** - Type 2 **3** - Type 3 **5W** - Type 5 Wide **FT** - Forward Throw **FTA** - Forward Throw Automotive **AM** - Automotive Merchandise	**(blank)** - standard **L**- Optics rotated left 90 **R** - Optics rotated right 90	**UNV** - Universal Voltage (120-277V) **HV** - High Voltage (347-480V)	**DIM** - 0-10V Dimming (0-10%)

Color Temp	Color Rendering	Finish	Options
50 - 5,000 CCT **40** - 4,000 CCT **30** - 3,000 CCT[2] **AMB** - Phosphor Converted Amber[2,3]	**70CRI** - 70 CRI	**BRZ** - Bronze **BLK** - Black **GPT** - Graphite **MSV** - Metallic Silver **WHT** - White **PLP** - Platinum Plus **SVG** - Satin Verde Green Finish selected by arch.	**(Blank)** - None **IH** - Integral Houseside Shield[1] **IL** - Integral Louver (Sharp Spill Light Cutoff)[1]

Controls (Choose One)

(Blank) - None

Wireless Controls System
ALSC - AirLink Synapse Control System [4]
ALSCH - AirLink Synapse Control System Host / Satelite[4,5]
ALSCS01 - AirLink Synapse Control System with 8-12' Motion Sensor [4]
ALSCHS01 - AirLink Synapse Control System Host / Satelite with 8-12' Motion Sensor [4,5]
ALSCS02 - AirLink Synapse Control System with 12-20' Motion Sensor[4]
ALSCHS02 - AirLink Synapse Control System Host / Satelite with 12-20' Motion Sensor [4,5]
ALSCS04 - AirLink Synapse Control System with 20-40' Motion Sensor [4]
ALSCHS04 - AirLink Synapse Control System Host / Satelite with 20-40' Motion Sensor [4,5]
ALBCS1 - AirLink Blue Wireless Motion & Photo Sensor Controller (8-24' mounting height)[4]
ALBCS2 - AirLink Blue Wireless Motion & Photo Sensor Controller (25-40' mounting height)[4]

Stand-Alone Controls
EXT - 0-10v Dimming leads extended to housing exterior
CR7P - 7 Pin Control Receptacle ANSI C136.41 [7]
IMSBT1- Integral Bluetooth™ Motion and Photocell Sensor max 8-24' mounting height [4, 6]
IMSBT2- Integral Bluetooth Motion and Photocell Sensor max 25-40' mounting height [4, 6]

Button Type Photocells
PCI120 - 120V
PCI208-277 - 208 -277V
PCI347 - 347V

(Lutron Limelight Controls
LLC – LimeLight Integral Wireless Radio Control by Lutron[4]
LLCS1 – Limelight Integral Wireless Radio Control and PIR Motion/ Daylight Sensor by Lutron 8-15' mt height[4]
LLCS2 – Limelight Integral Wireless Radio Control and PIR Motion/ Daylight Sensor by Lutron 16-30' mt height[4]
LLCS3 – Limelight Integral Wireless Radio Control and PIR Motion/ Daylight Sensor by Lutron 31-40' mt height[4]

Accessory Ordering Information[8]

Controls Accessories

Description	Order Number[10]
Twist Lock Photocell (120V) for use with CR7P	122514
Twist Lock Photocell (208-277) for use with CR7P	122515
Twist Lock Photocell (347V) for use with CR7P	122516
Twist Lock Photocell (480V) for use with CR7P	1225180
AirLink 5 Pin Twist Lock Controller	661409
AirLink 5 Pin Twist Lock Controller	661410
Pole-Mounted Occupancy Sensor (24V)	663284CLR
Shorting Cap for use with CR7P	149328

Mounting Accessories

Description	Order Number[10]
Universal Mounting Bracket	684616CLR
Adjustable Slip Fitter (2" - 2 3/8" Tenon)	688138CLR
Horizontal Slip Fitter (2" - 2 3/8" Tenon)	652761CLR
Quick Mount Pole Bracket (Square Pole)	687073CLR
Quick Mount Pole Bracket (4-5" Round Pole)	689903CLR
15 Tilt Quick Mount Pole Bracket (Square Pole)	688003CLR
15 Tilt Quick Mount Pole Bracket (4-5" Round Pole)	689905CLR
Wall Mount Bracket	382132CLR
Integral Louver/Shield	690981
Internal Houseside Shield	743415

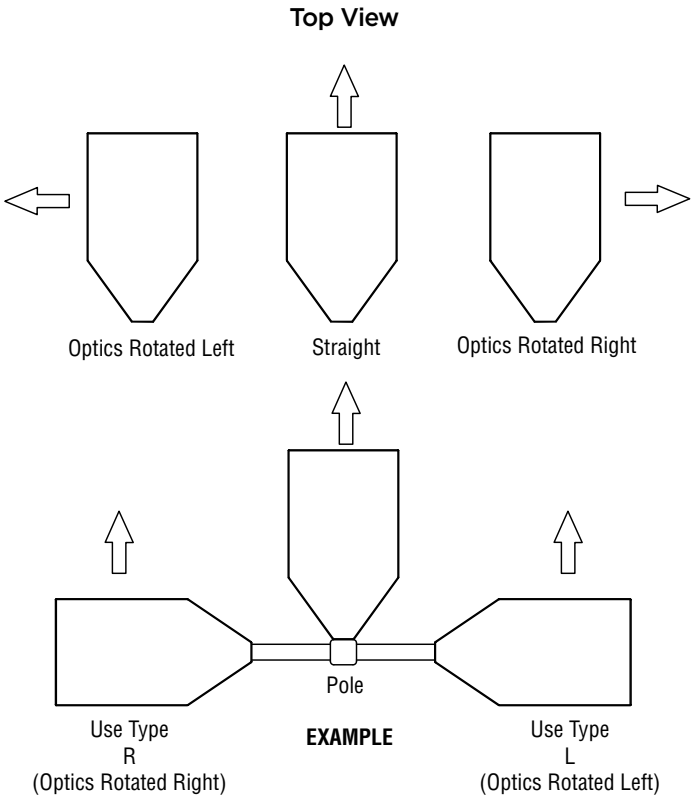
Fusing Accessories[12]

Description	Order Number
Single Fusing (120V)	FK120
Single Fusing (277V)	FK277
Double Fusing (480V)	DFK480
Double Fusing (347V)	DFK347

FOOTNOTES:
1 - Not available on "Type 5W" distribution.
2 - Consult Factory for availability.
3 - Only available in 9L and 12L Lumen Packages
4 - Not available in HV.
5 - Consult Factory for Site Layout
6 - IMSBT is field configurable via the LSI app that can be downloaded from your smartphone's native app store
7 - Control device or shorting cap must be ordered separately. See Accessory Ordering Information.
8 - Accessories are shipped separately and field installed.
9 - Factory installed CR7P option required. See Options.
10 - "CLR" denotes finish. See Finish options.
11 - Not available in UNV.
12 - Fusing must be located in hand hole of pole.

Mirada Medium Outdoor LED Area Light

OPTICS ROTATION

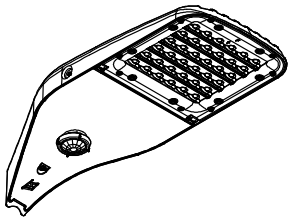


ACCESSORIES/OPTIONS

Integral Louver (IL) and House-Side Shield (IH)

Accessory louver and shield available for improved backlight control without sacrificing street side performance. LSI's Integral Louver (L) and Integral House-Side Shield (IH) options deliver backlight control that significantly reduces spill light behind the poles for applications with pole locations close to adjacent properties. The design maximizes forward reflected light while reducing glare, maintaining the optical distribution selected, and most importantly eliminating light trespass. Both options rotate with the optical distribution.

Luminaire Shown with Integral Louver (IL)

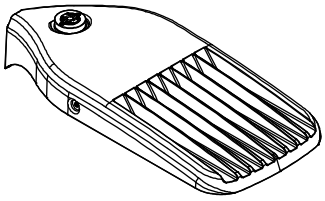


Luminaire Shown with IMSBT Option

7 Pin Photoelectric Control

7-pin ANSI C136.41-2013 control receptacle option available for twist lock photocontrols or wireless control modules. Control accessories sold separately. Dimming leads from the receptacle will be connected to the driver dimming leads (Consult factory for alternate wiring).

Luminaire Shown with PCR 7P



Mirada Medium Outdoor LED Area Light

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PERFORMANCE

Delivered Lumens*

Lumen Package	Distribution	CRI	3000K CCT			4000K CCT			5000K CCT			Wattage
			Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	
7L	2	70	6711	127	B2-U0-G1	7208	137	B2-U0-G2	7596	144	B2-U0-G2	53
	3		6889	130	B1-U0-G2	7400	140	B1-U0-G2	7798	148	B1-U0-G2	
	5W		6557	124	B3-U0-G1	7043	133	B3-U0-G2	7422	141	B3-U0-G2	
	FT		6701	127	B1-U0-G2	7197	136	B1-U0-G2	7584	144	B2-U0-G2	
	FTA		6799	129	B2-U0-G1	7303	138	B2-U0-G1	7696	146	B2-U0-G1	
	AM		7225	136	B1-U0-G1	7922	149	B2-U0-G1	8239	155	B2-U0-G1	
9L	2	70	8576	125	B2-U0-G2	9396	137	B2-U0-G2	9784	143	B2-U0-G2	68
	3		8804	129	B1-U0-G2	9646	141	B2-U0-G2	10044	147	B2-U0-G2	
	5W		8380	122	B3-U0-G2	9181	134	B3-U0-G2	9560	140	B3-U0-G2	
	FT		8563	125	B2-U0-G2	9382	137	B2-U0-G2	9769	143	B2-U0-G2	
	FTA		8689	127	B2-U0-G2	9520	139	B2-U0-G2	9913	145	B2-U0-G2	
	AM		9432	137	B2-U0-G1	10342	150	B2-U0-G2	10755	156	B2-U0-G2	
12L	2	70	11461	122	B2-U0-G2	12556	134	B3-U0-G2	13075	139	B3-U0-G2	93
	3		11766	125	B2-U0-G2	12890	137	B2-U0-G2	13423	143	B2-U0-G2	
	5W		11199	119	B4-U0-G2	12269	131	B4-U0-G2	12775	136	B4-U0-G2	
	FT		11444	122	B2-U0-G2	12538	133	B2-U0-G3	13055	139	B2-U0-G3	
	FTA		11612	124	B2-U0-G2	12722	135	B2-U0-G2	13247	141	B2-U0-G2	
	AM		12582	134	B2-U0-G2	13796	147	B2-U0-G2	14348	153	B2-U0-G2	
18L	2	70	17168	115	B3-U0-G3	18809	126	B3-U0-G3	19586	131	B3-U0-G3	149
	3		17625	118	B2-U0-G3	19310	129	B3-U0-G3	20107	134	B3-U0-G3	
	5W		16776	112	B4-U0-G2	18379	123	B4-U0-G2	19138	128	B5-U0-G3	
	FT		17143	115	B3-U0-G3	18781	126	B3-U0-G4	19557	131	B3-U0-G4	
	FTA		17395	116	B3-U0-G3	19058	127	B3-U0-G3	19844	133	B3-U0-G3	
	AM		18863	127	B3-U0-G2	20683	149	B3-U0-G2	21511	149	B3-U0-G2	
24L	2	70	22701	121	B4-U0-G3	24276	130	B4-U0-G3	24784	133	B4-U0-G3	189
	3		23636	126	B3-U0-G4	25275	135	B3-U0-G4	25804	138	B3-U0-G4	
	5W		22432	120	B5-U0-G3	23988	128	B5-U0-G3	24490	131	B5-U0-G3	
	FT		23496	126	B3-U0-G4	25126	134	B3-U0-G4	25652	137	B3-U0-G4	
	FTA		23371	125	B3-U0-G3	24992	134	B3-U0-G3	25515	136	B3-U0-G3	
	AM		24522	131	B3-U0-G3	26227	140	B3-U0-G3	26751	143	B3-U0-G3	
30L	2	70	28900	117	B4-U0-G3	30905	125	B4-U0-G3	31551	128	B4-U0-G3	249
	3		30089	122	B3-U0-G4	32176	130	B3-U0-G4	32850	133	B3-U0-G4	
	5W		28557	116	B5-U0-G3	30538	124	B5-U0-G4	3117	126	B5-U0-G4	
	FT		29912	121	B3-U0-G4	31987	130	B3-U0-G4	32656	132	B3-U0-G5	
	FTA		29752	120	B4-U0-G3	31816	129	B4-U0-G3	32482	132	B4-U0-G3	
	AM		31061	126	B3-U0-G3	33221	134	B3-U0-G3	33885	137	B3-U0-G3	
36L	2	70	35025	111	B4-U0-G3	37454	118	B4-U0-G3	38238	121	B4-U0-G4	318
	3		36466	115	B3-U0-G5	38996	123	B3-U0-G5	39812	126	B3-U0-G5	
	5W		34609	109	B5-U0-G4	37010	117	B5-U0-G4	37785	119	B5-U0-G4	
	FT		36251	114	B3-U0-G5	38766	122	B4-U0-G5	39557	125	B4-U0-G5	
	FTA		36058	114	B4-U0-G4	38559	122	B4-U0-G4	39366	124	B4-U0-G3	
	AM		37429	118	B3-U0-G3	40030	126	B3-U0-G3	40831	129	B3-U0-G3	

Mirada Medium Outdoor LED Area Light

PERFORMANCE (CONT.)

Delivered Lumens*

Lumen Package	Distribution	CRI	3000K CCT			4000K CCT			5000K CCT			Wattage
			Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	
42L	2	70	3994	103	B5-U0-G4	42768	110	B5-U0-G4	43663	112	B5-U0-G4	393
	3		41640	107	B4-U0-G5	44528	114	B4-U0-G5	45460	117	B4-U0-G5	
	5W		39520	101	B5-U0-G4	42261	108	B5-U0-G4	43145	111	B5-U0-G4	
	FT		41395	106	B4-U0-G5	44266	114	B4-U0-G5	45192	116	B4-U0-G5	
	FTA		41174	106	B4-U0-G4	44030	113	B4-U0-G4	44951	115	B4-U0-G4	
	AM		43021	109	B3-U0-G3	46012	117	B4-U0-G3	46932	119	B4-U0-G3	

ELECTRICAL DATA (AMPS)*

Lumens	Watts	120V	208V	240V	277V	347V	480V
7L	53	0.4A	0.3A	0.2A	0.2A	0.2A	0.1A
9L	69	0.6A	0.3A	0.3A	0.2A	0.2A	0.1A
12L	94	0.8A	0.5A	0.4A	0.3A	0.3A	0.2A
18L	150	1.2A	0.7A	0.6A	0.5A	0.4A	0.3A
24L	187	1.6A	0.9A	0.8A	0.7A	0.5A	0.4A
30L	247	2.1A	1.2A	1.0A	0.9A	0.7A	0.5A
36L	317	2.6A	1.5A	1.3A	1.1A	0.9A	0.7A
42L	390	3.2A	1.9A	1.6A	1.4A	1.1A	0.8A

ELECTRICAL DATA - PHOSPHOR CONVERTED AMBER (AMPS)*

Lumens	Watts	120V	208V	240V	277V	347V	480V
9L	74.3	0.6A	0.4A	0.3A	0.3A	0.2A	0.2A
12L	102.9	0.9A	0.5A	0.4A	0.4A	0.3A	0.2A

*Electrical data at 25°C (77°F). Actual wattage may differ by +/-10%

LUMINAIRE EPA CHART - MRM

Tilt Degree		0°	30°	45°	Tilt Degree		0°	30°	45°
	Single	0.5	1.5	1.9		T90°	1.0	2.5	2.8
	D180°	1.0	1.5	1.9		TN120°	1.0	3.3	3.9
	D90°	0.8	1.9	2.3		Q90°	1.0	2.5	2.8

RECOMMENDED LUMEN MAINTENANCE[1] (7-18L)

Ambient	Intial[2]	25h[2]	50hr[2]	75hr[2]	100hr[2]
0-50 C	100%	96%	92%	88%	84%

RECOMMENDED LUMEN MAINTENANCE[1] (24-42L)

Ambient	Intial[2]	25h[2]	50hr[2]	75hr[2]	100hr[2]
0-40 C	100%	100%	97%	94%	92%

1. Lumen maintenance values at 25C are calculated per TM-21 based on LM-80 data and in-situ testing.
2. In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.
3. In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing.

DELIVERED LUMENS*

Lumen Package	Distribution	Phosphor Converted Amber (Peak 610mm)			Wattage
		Delivered Lumens	Efficacy	BUG Rating	
9L	2	5848	80	B2-U0-G2	74
	2 - IL	3644	50	B0-U0-G1	
	3	6018	82	B1-U0-G2	
	3 - IL	4468	61	B0-U0-G2	
	5W	5471	74	B3-U0-G1	
	FT	5801	79	B1-U0-G2	
	FT - IL	3649	50	B0-U0-G1	
	FTA	5924	81	B1-U0-G1	
	FTA - IL	4243	58	B1-U0-G1	
12L	2	7530	74	B2-U0-G2	102
	2 - IL	4692	46	B0-U0-G1	
	3	7749	76	B1-U0-G2	
	3 - IL	5753	57	B0-U0-G2	
	5W	7045	69	B3-U0-G2	
	FT	7470	73	B2-U0-G2	
	FT - IL	4699	46	B0-U0-G2	
	FTA	7628	75	B2-U0-G2	
	FTA-IL	5464	54	B1-U0-G1	

*LEDs are frequently updated therefore values are nominal.

Mirada Medium Outdoor LED Area Light

PHOTOMETRICS

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Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

See http://www.lsi-industries.com/products/led-lighting-solutions.aspx for detailed photometric data.

MRM-LED-30L-SIL-2-40-70CRI

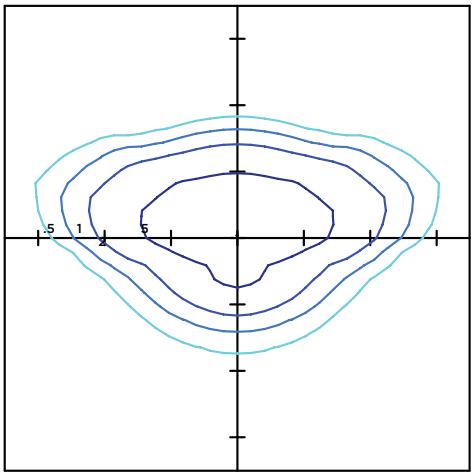
LUMINAIRE DATA

Type 2 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	30,905
Watts	247
Efficacy	125
IES Type	Type II - Short
BUG Rating	B4-U0-G3

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	4392	14%
Medium (30-60)°	18894	61%
High (60-80)°	7359	24%
Very High (80-90)°	260	1%
Uplight (90-180)°	0	0%
Total Flux	30905	100%

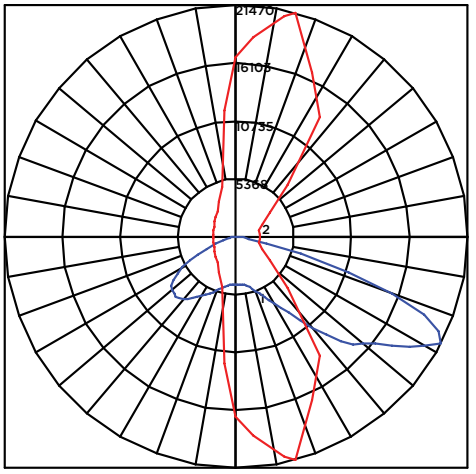
ISO FOOTCANDLE



25' Mounting Height/ 25' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

POLAR CURVE



MRM-LED-30L-SIL-3-40-70CRI

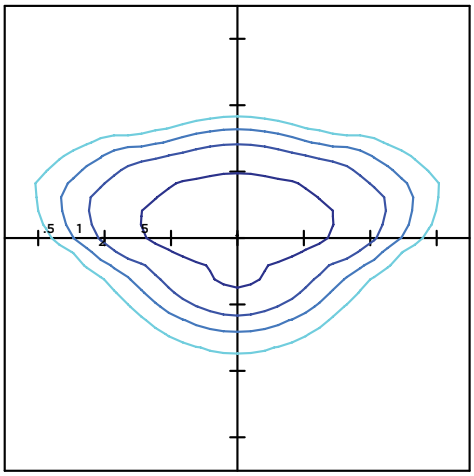
LUMINAIRE DATA

Type 3 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	32,176
Watts	247
Efficacy	130
IES Type	Type III - Short
BUG Rating	B3-U0-G4

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	2970	9%
Medium (30-60)°	16127	50%
High (60-80)°	12779	40%
Very High (80-90)°	301	1%
Uplight (90-180)°	0	0%
Total Flux	32176	100%

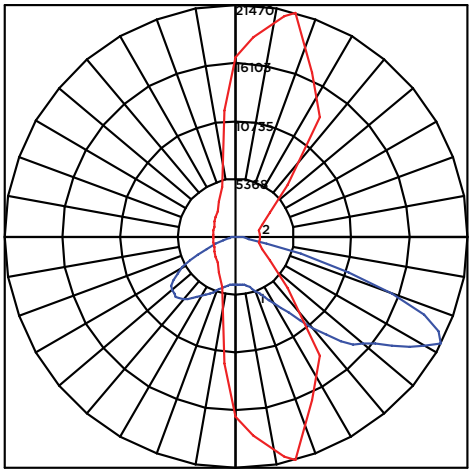
ISO FOOTCANDLE



25' Mounting Height/ 25' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

POLAR CURVE



Mirada Medium Outdoor LED Area Light

PHOTOMETRICS (CONT)

MRM-LED-30L-SIL-FT-40-70CRI

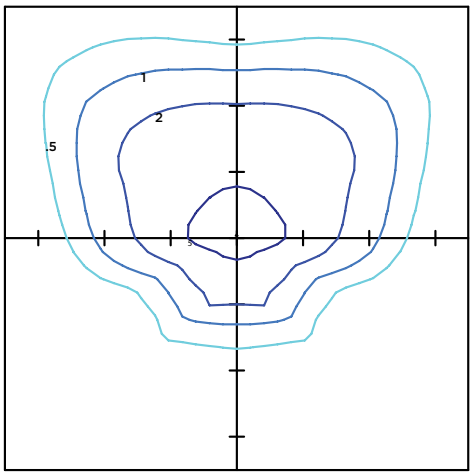
LUMINAIRE DATA

Type FT Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	31,987
Watts	247
Efficacy	130
IES Type	Type IV - Short
BUG Rating	B3-U0-G4

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	4126	13%
Medium (30-60)°	13479	42%
High (60-80)°	13768	43%
Very High (80-90)°	614	2%
Uplight (90-180)°	0	0%
Total Flux	31987	100%

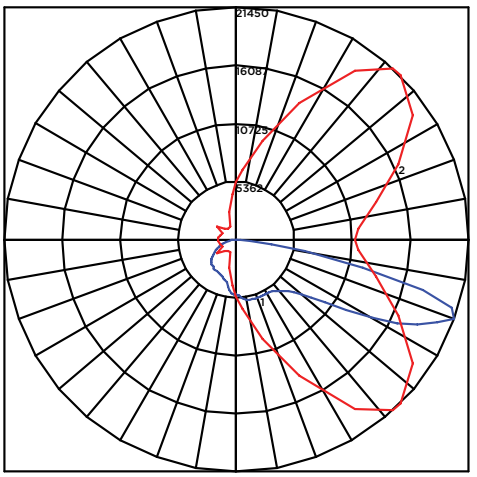
ISO FOOTCANDLE



25’ Mounting Height/ 25’ Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

POLAR CURVE



MRM-LED-30L-SIL-5W-40-70CRI

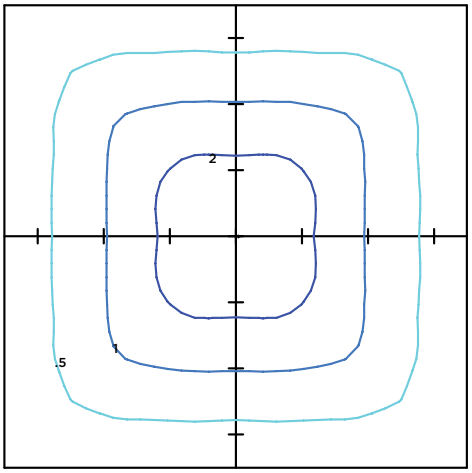
LUMINAIRE DATA

Type 5W Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	30,538
Watts	247
Efficacy	124
IES Type	Type VS - Short
BUG Rating	B5-U0-G4

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	2862	9%
Medium (30-60)°	12032	39%
High (60-80)°	15328	50%
Very High (80-90)°	315	1%
Uplight (90-180)°	0	0%
Total Flux	30538	100%

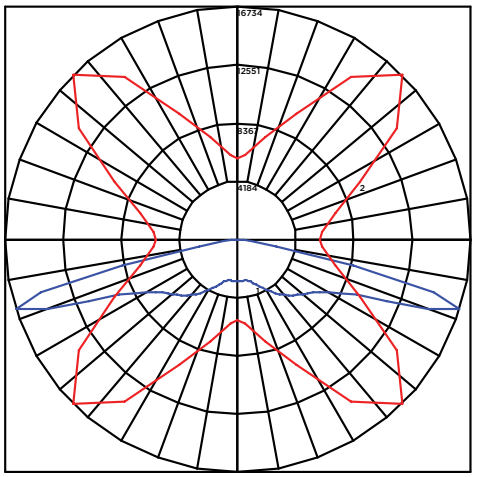
ISO FOOTCANDLE



25’ Mounting Height/ 25’ Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

POLAR CURVE



PHOTOMETRICS (CONT)

MRM-LED-30L-SIL-FTA-40-70CRI

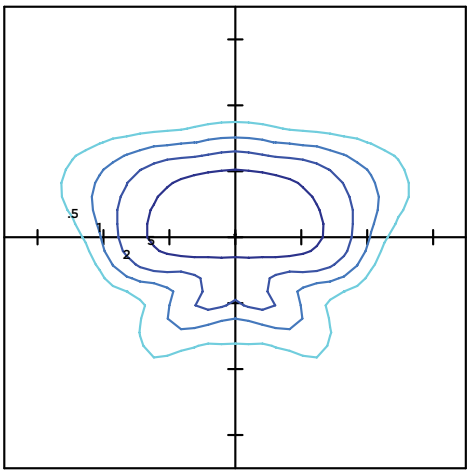
LUMINAIRE DATA

Type FTA Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	31,816
Watts	247
Efficacy	129
IES Type	Type II - Short
BUG Rating	B4-U0-G3

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	6758	21%
Medium (30-60)°	18845	59%
High (60-80)°	5872	18%
Very High (80-90)°	341	1%
Uplight (90-180)°	0	0%
Total Flux	31816	100%

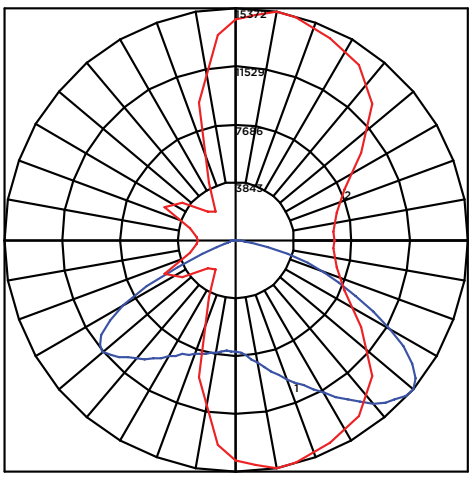
ISO FOOTCANDLE



25’ Mounting Height/ 25’ Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

POLAR CURVE



MRM-LED-30L-SIL-AM-40-70CRI

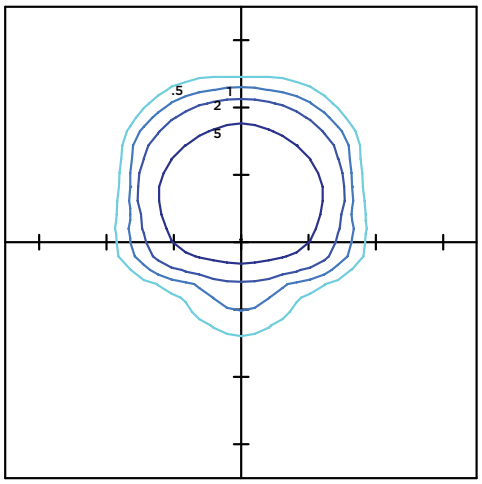
LUMINAIRE DATA

Type AM Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	33,221
Watts	247
Efficacy	134
IES Type	Type III - Very Short
BUG Rating	B3-U0-G3

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	5550	17%
Medium (30-60)°	21354	64%
High (60-80)°	5881	18%
Very High (80-90)°	435	1%
Uplight (90-180)°	0	0%
Total Flux	33221	100%

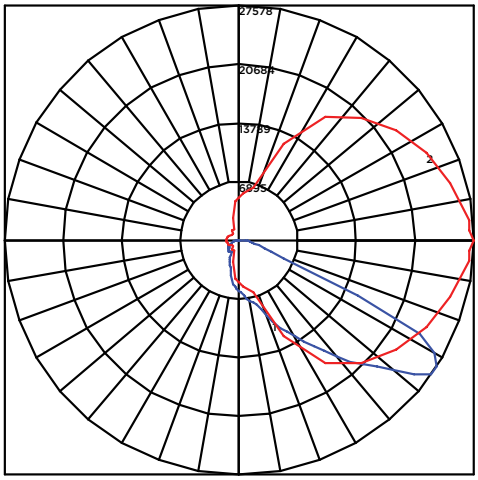
ISO FOOTCANDLE



25’ Mounting Height/ 25’ Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

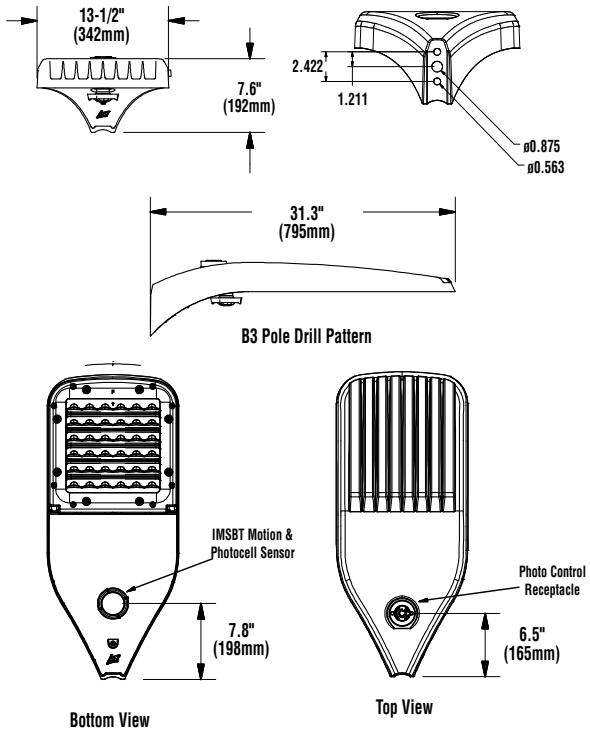
POLAR CURVE



Mirada Medium Outdoor LED Area Light

Back to Quick Links

PRODUCT DIMENSIONS



CONTROLS

AirLink Wireless Lighting Controller

The AirLink integrated controller is a California Title 24 compliant lighting controller that provides real-time light monitoring and control with utility-grade power monitoring. It includes a 24V sensor input and power supply to connect a sensor into the outdoor AirLink wireless lighting system. The wireless integrated controller is compatible with this fixture.

Click the link below to learn more details about AirLink.

https://www.lsicorp.com/wp-content/uploads/documents/products/airlink-outdoor-specsheet.pdf

Integral Bluetooth™ Motion and Photocell Sensor (IMSBT)

Slim low profile sensor provides multi-level control based on motion and/or daylight. Sensor controls 0-10 VDC LED drivers and is rated for cold and wet locations (-30° C to 70° C). Two unique PIR lenses are available and used based on fixture mounting height. All control parameters are adjustable via an iOS or Android App capable of storing and transmitting sensor profiles.

Click the link below to learn more details about IMSBT.

https://www.lsicorp.com/wp-content/uploads/documents/products/imsbt-specsheet.pdf

AirLink Blue

Wireless Bluetooth Mesh Outdoor Lighting Control System that provides energy savings, code compliance and enhanced safety/security for parking lots and parking garages. Three key components; Bluetooth wireless radio/sensor controller, Time Keeper and an iOS App. Capable of grouping multiple fixtures and sensors as well as scheduling time-based events by zone. Radio/Sensor Controller is factory integrated into Area/Site, Wall Mounted, Parking Garage and Canopy luminaires.

Click the link below to learn more details about AirLink Blue.

https://www.lsicorp.com/product/airlink-blue/

Mirada Medium Outdoor LED Area Light

POLES & BRACKETS

LSI offers a full line of poles and mounting accessories to complete your lighting assembly. Aluminum and steel in both square and round shafts. In addition, LSI offers round tapered, fluted and hinge based poles. Designed and engineered for durability and protected with our oven baked DuraGrip Protection System. Also available with our DuraGrip+ Protection system for unmatched corrosion resistance and an extended warranty. American made in our Ohio facility with industry leading lead times.

Click the link below to learn more details about poles & brackets.

https://www.lsicorp.com/products/poles-brackets/

BKA UMB CLR

The 3G rated UMB allows for seamless integration of LSI luminaires onto existing/ retrofit or new construction poles. The UMB was designed for square or round (tapered or straight) poles with two mounting hole spacings between 3.5" – 5".

BKA ASF CLR

The adjustable Slip Fitter is a 3G rated rugged die cast aluminum adapter to mount LSI luminaires onto a onto a 2" iron pipe , 2 3/8 OD tenon. The Adjustable Slip Fitter can be rotated 180° allowing for tilting LSI luminaires up to 45° and 90° when using a vertical tenon.

BKS PQM15 CLR

The Pole Quick Mount Bracket allows for preset 15° uptilt of LSI luminaires for greater throw of light and increased vertical illumination as well as fast installation onto poles with LSI's 3" or 5" bolt pattern.

BKS PQMH CLR

The Pole Quick Mount Bracket allows for lightning fast installation of LSI luminaires onto existing and new construction poles with LSI's B3 or B5 standard pole bolt patterns.

Square Pole
14'-39'

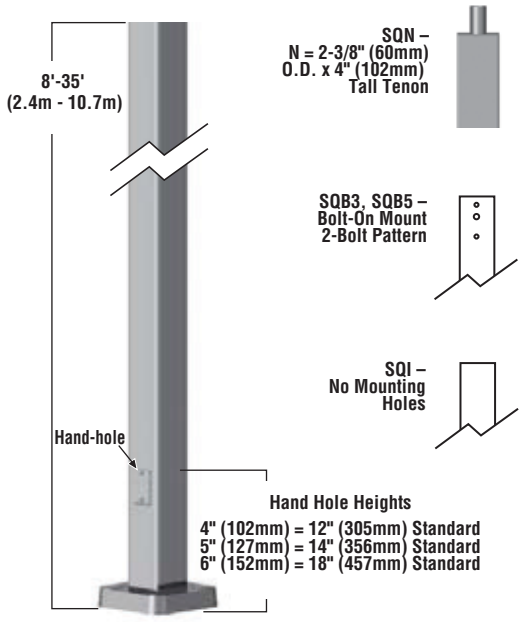
Round Pole
10'-30'

Tapered Pole
20'-39'

A4
4SQB3-A125-13'-6"-S-BRZ

ALUMINUM SQUARE POLES (SOFT CORNER)

DIMENSIONS



Nut Covers Discs (Standard)

Square Two-Piece Cast Base Cover (Optional)

POLE SHAFT - The soft corner pole shaft is extruded from seamless alloy aluminum. On Tenon Mount poles, tenon is 2-3/8" O.D. x 4" tall high-strength pipe. Aluminum straight poles are 4", 5" and 6" square.

HAND-HOLE - On 4" square poles, standard hand hole is 2" x 4" located 12" up from bottom of base plate. On 5" square poles, standard hand hole is 2" x 4" located 14" up from bottom of base plate. On 6" square poles, standard hand hole is 2-5/8" x 5" located 18" up from bottom of base plate. Hand hole gasket is provided. Optional festoon for GFI receptacle (with or without GFI Kit supplied) is available. Minimum height for location of festoon is 18" above standard hand hole.

BASE - Pole base is cast from 356 alloy aluminum. Completed assembly is heat-treated to a T6 temper. Tamper-resistant aluminum nut cover discs are included with anchor base.

BASE COVERS - Tamper-resistant aluminum nut cover discs are included with anchor base. Optional two-piece square cast base covers available. Must be ordered separately.

ANCHOR BOLTS - Set of four anchor bolts conform to ASTM F1554 Grade 55. Each bolt is provided with two hex nuts and two flat washers. Bolts have an "L" bend on one end and are galvanized a minimum of 12" on the threaded end.

GROUND LUG - Ground lug is standard.

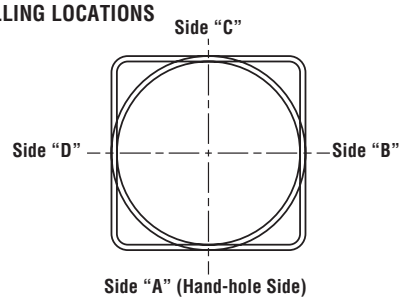
GROUND FAULT CIRCUIT INTERRUPTER - Ground fault circuit interrupter kit is optional. Pole Preparation (festoon) with GFI Kit must be ordered. Specify location in feet above base of pole and side orientation. Minimum height for location of festoon is 18" above standard hand hole.

FINISHES - Baked-on polyester-powder finish provides one year limited warranty.

DETERMINING THE LUMINAIRE/POLE COMBINATION FOR YOUR APPLICATION:

- Select luminaire from luminaire ordering information
- Select bracket configuration if required
- Determine EPA value from luminaire/bracket EPA chart
- Select pole height
- Select MPH to match wind speed in the application area (See windspeed map).
- Confirm pole EPA equal to or exceeding value from note above
- Confirm total luminaire/bracket weight does not exceed maximum weight shown in chart below
- Consult factory for special wind load requirements

DRILLING LOCATIONS



Sides	A	B	C	D
Hand-hole	X			
Single	X			
D180°		X		X
D90°	X			X
T90°	X	X		X
Q90°	X	X	X	X

POLE SELECTION CHART: 4" (102mm), 5" (127mm) and 6" (152mm) aluminum square poles

Height	EPA 70 MPH	EPA 80 MPH	EPA 90 MPH	EPA 100 MPH	Outside Dimensions	Material	Max Weight (lbs)[1]	Bolt Circle	Structure Weight (lbs)[2]
8' (2.4m)	24.3	18.2	14.0	10.9	4" (102mm)	0.125	350	G	24
10' (3.0m)	18.9	13.9	10.5	8.0	4" (102mm)	0.125	260	G	28
12' (3.7m)	14.7	10.6	7.7	5.7	4" (102mm)	0.125	260	G	33
14' (4.3m)	11.9	8.3	5.8	4.1	4" (102mm)	0.125	200	G	37
15' (4.6m)	8.3	5.7	3.8	2.6	4" (102mm)	0.125	200	G	39
16' (4.9m)	7.3	4.8	3.1	1.9	4" (102mm)	0.125	200	G	42
16' (4.9m)	12.3	8.6	6.1	4.3	4" (102mm)	0.188	200	G	59
18' (5.5m)	5.9	3.6	2.1	N/A	4" (102mm)	0.125	100	G	46
18' (5.5m)	10.1	6.8	4.6	3.0	4" (102mm)	0.188	150	G	66
18' (5.5m)	18.0	12.7	9.0	6.4	5" (127mm)	0.188	260	H	85
20' (6.1m)	4.1	2.1	N/A	N/A	4" (102mm)	0.125	150	G	51
20' (6.1m)	8.1	5.2	3.1	1.7	4" (102mm)	0.188	150	G	73
20' (6.1m)	15.4	10.5	7.1	4.7	5" (127mm)	0.188	150	H	93
20' (6.1m)	24.8	17.4	12.3	8.7	6" (152mm)	0.188	150	I	114
20' (6.1m)	33.8	24.3	17.8	13.2	6" (152mm)	0.250	260	I	148
25' (7.6m)	9.5	5.6	3.0	1.0	5" (127mm)	0.188	100	H	115
25' (7.6m)	15.8	10.1	6.1	3.3	6" (152mm)	0.188	260	I	139
25' (7.6m)	23.3	15.8	10.7	7.0	6" (152mm)	0.250	260	I	182
30' (9.1m)	14.2	8.6	4.8	2.0	6" (152mm)	0.250	260	I	216
32' (9.8m)	12.2	6.9	3.2	N/A	6" (152mm)	0.250	150	I	229
35' (10.7m)	9.1	4.2	N/A	N/A	6" (152mm)	0.250	100	I	250

EPA based on commercial criteria. For applications in Canada and areas using code requirements other than commercial criteria, consult factory. Designs are limited to top-mounted and side-mount luminaires. Variations from sizes above are available, consult factory. Satisfactory performance of poles is dependent upon the pole being properly attached to a supporting foundation of adequate design. Refer to EPA information on next page. Maximum luminaire/bracket weight is shown on the above chart.

1- Maximum weight of fixtures/brackets to be mounted to pole.
2- Structure weight is a nominal value which includes the pole shaft and base plate.

ARRA
Funding Compliant

Project Name _____ Fixture Type _____

Catalog # _____

10/22/15

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4SQB3-A125-13'-6"-S-BRZ

ALUMINUM SQUARE POLES (SOFT CORNER)

POLE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **5SQB5 A188 25 S BRZ**

Pole Series	Material	Height[2]	Mounting Configuration[4]	Pole Finish	Options
Bolt-On Mount - See selection guide for patterns and fixture matches. **4SQB3 -** 3" Reduced Drilling Pattern **5SQB3 -** 3" Reduced Drilling Pattern **4SQB5 -** 5" Traditional Drilling Pattern **5SQB5 -** 5" Traditional Drilling Pattern **6SQB5 -** 5" Traditional Drilling Pattern	A125 - .125 Aluminum A188 - .188 Aluminum A250 - .250 Aluminum	8' 10' 12' 14' 16' 18' 20' 25' 30'[3] 32'[3] 35'[3]	S - Single/Parallel D180° - Double D90° - Double T90° - Triple Q90° - Quad	BRZ – Bronze BLK – Black WHT – White SVG - Satin Verde Green MSV - Metallic Silver	FP - Festoon Outlet Provision Less GFI Kit[5] FPG - Festoon Outlet Provision With GFI Kit[5] LAB - Less Anchor Bolts
Tenon Mount - See selection guide for tenon and fixture/bracket matches. **4SQN** **5SQN** **6SQN**	**Consult Pole Selection Chart on opposite page**		N – Tenon Mount		
Internal Slip-fitter[1] No mounting holes or pole caps - Use with BKA 4ISF, BKA 5ISF, BKA X4ISF & BKA X5ISF **4SQI** **5SQI**			*		

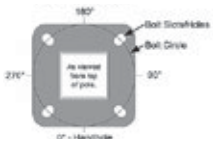
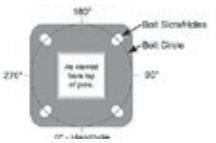
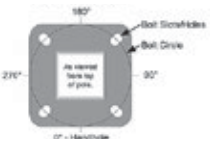
FOOTNOTES:

1 - See Area Lighting Brackets - Bolt-on and XAS3/XAMU Area Lighting Brackets pages for Internal Slip-fitter brackets.
2 - Pole heights will have +/- 2" tolerance.
3 - Pole includes factory installed vibration damper.
4 - TN120° mounting configuration not available.
5 - Specify location in feet above base of pole and side orientation. Minimum height is 18" up from standard hand hole.

ACCESSORY ORDERING INFORMATION (Accessories are field installed)

Description	Order Number
4DABC - 4" Square Cast 2-Piece Base Cover	505605CLR
5DABC - 5" Square Cast 2-Piece Base Cover	505606CLR
6DABC - 6" Square Cast 2-Piece Base Cover	505608CLR

BOLT CIRCLE

	4" (102mm) Square 9-15/16" (252mm) Square Base Plate	5" (127mm) Square 11-9/16" (294mm) Square Base Plate	6" (152mm) Square 12-3/4" (324mm) Square Base Plate
			
	9" (229mm) Dia. Bolt Circle +/- 1/2" (13mm) G	11" (279mm) Dia. Bolt Circle +/- 1/2" (13mm) H	12-1/2" (318mm) Dia. Bolt Circle +/- 7/16" (11mm) I
Bolt Circle	9" +/- 1/2" (229mm +/- 13mm)	11" +/- 1/2" (279mm +/- 13mm)	12-1/2" +/- 7/16" (318mm +/- 11mm)
Anchor Bolt Size	3/4" dia. x 17" x 3" hook (19mm x 432mm x 76 mm)	3/4" dia. x 17" x 3" hook (19mm x 432mm x 76 mm)	1" dia. x 36" x 4" hook (25mm x 914mm x 102mm)
Anchor Bolt Projection	3-1/8" (79mm)	3-1/4" (83mm)	4" (102mm)
Base Plate Dimensions	9-15/16" sq. x 3/8" thk. (252mm x 10mm)	11-9/16" sq. x 1/2" thk. (294mm x 13mm)	12-3/4" sq. x 9/16" thk. (324mm x 14mm)

Note: Base plate illustrations may change without notice. Do not use for setting anchor bolts. Consult factory for the base plate templates.

EPA INFORMATION

All poles are guaranteed to meet the EPA requirements listed. Pole manufacturer is not responsible if a pole order has a lower EPA rating than the indicated wind-loading zone where the pole will be located.
CAUTION: This guarantee does not apply if the pole/bracket/fixture combination is used to support any other items such as flags, pennants, or signs, which would add stress to the pole. Pole manufacturer cannot accept responsibility for harm or damage caused in these situations.

NOTE: Pole calculations include a 1.3 gust factor over steady wind velocity. Example: poles designed to withstand 80 MPH steady wind will withstand gusts to 104 MPH. EPAs are for locations 100 miles away from hurricane ocean lines. Consult LSI for other areas. Note: Hurricane ocean lines are the Atlantic and Gulf of Mexico coastal areas. For applications in Canada, and areas using code requirements other than commercial criteria, consult factory.

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WDGE1 LED
Architectural Wall Sconce

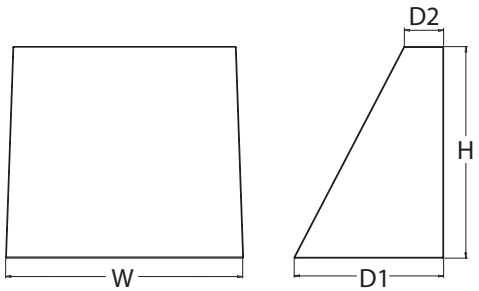
Buy American

Catalog Number	WDGE1LED-P1-40K-80CRI-VF
Notes	
Type	E2

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1): 5.5"
Depth (D2): 1.5"
Height: 8"
Width: 9"
Weight: (without options) 9 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution.

WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.

WDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K)					
				P1	P2	P3	P4	P5	P6
WDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE1 LED	P1	27K 2700K	80CRI	VF Visual comfort forward throw	MVOLT	**Shipped included**
	P2	30K 3000K	90CRI	VW Visual comfort wide	347[2]	SRM Surface mounting bracket
		35K 3500K				ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[5]
		40K 4000K				**Shipped separately**
		50K[1] 5000K				AWS 3/8inch Architectural wall spacer
						PBBW Surface-mounted back box (top, left, right conduit entry) Use when there is no junction box available.

Options

E4WH[3]	Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)
PE[4]	Photocell, Button Type
DS	Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)
DMG	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)
BCE	Bottom conduit entry for back box (PBBW). Total of 4 entry points.
BAA	Buy America(n) Act Compliant

Finish

DDBXD	Dark bronze	DDBTXD	Textured dark bronze
DBLXD	Black	DBLBXD	Textured black
DNAXD	Natural aluminum	DNATXD	Textured natural aluminum
DWHXD	White	DWHGXD	Textured white
DSSXD	Sandstone	DSSTXD	Textured sandstone

Finish selected by arch.

Accessories

Ordered and shipped separately.

WDGEAWS DDBXD	WDGE 3/8inch Architectural Wall Spacer (specify finish)
WDGE1PBBW DDBXD U	WDGE1 surface-mounted back box (specify finish)

NOTES

1. 50K not available in 90CRI.
2. 347V not available with E4WH, DS or PE.
3. E4WH not available with PE or DS.
4. PE not available with DS.
5. Not qualified for DLC. Not available with E4WH.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	27K (2700K, 80 CRI)					30K (3000K, 80 CRI)					35K (3500K, 80 CRI)					40K (4000K, 80 CRI)					50K (5000K, 80 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P1	10W	VF	1,120	112	0	0	0	1,161	116	0	0	0	1,194	119	0	0	0	1,227	123	0	0	0	1,235	123	0	0	0
		VW	1,122	112	0	0	0	1,163	116	0	0	0	1,196	120	0	0	0	1,229	123	0	0	0	1,237	124	0	0	0
P2	15W	VF	1,806	120	1	0	0	1,872	125	1	0	0	1,925	128	1	0	0	1,978	132	1	0	0	1,992	133	1	0	0
		VW	1,809	120	1	0	0	1,876	125	1	0	0	1,929	128	1	0	0	1,982	132	1	0	0	1,996	133	1	0	0

Electrical Load

Performance Package	System Watts	Current (A)				
		120V	208V	240V	277V	347V
P1	10W	0.082	0.049	0.043	0.038	--
	13W	--	--	--	--	0.046
P2	15W	0.132	0.081	0.072	0.064	--
	18W	--	--	--	--	0.056

Lumen Multiplier for 90CRI

CCT	Multiplier
27K	0.845
30K	0.867
35K	0.845
40K	0.885
50K	0.898

Lumen Output in Emergency Mode (4000K, 80 CRI)

Option	Dist. Type	Lumens
E4WH	VF	646
	VW	647

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.96	>0.95	>0.91

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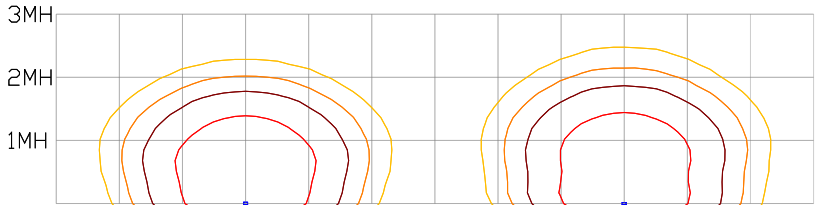
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting WDGE LED homepage. Tested in accordance with IESNA LM-79 and LM-80 standards.

LEGEND

- 0.25 fc
- 0.5 fc
- 1.0 fc
- 3.0 fc

MH = 8ft
Grid = 8ft x 8ft



WDGE1 LED P2 40K 80CRI VW

WDGE1 LED P2 40K 80CRI VF

Emergency Egress Options

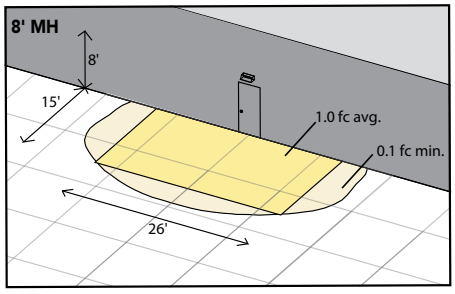
Emergency Battery Backup

The emergency battery backup is integral to the luminaire — no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product. All emergency battery backup configurations include an independent secondary driver with an integral relay to immediately detect loss of normal power and automatically energize the luminaire. The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time normal power is lost and maintain a minimum of 60% of the light output at the end of 90minutes.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9

The example below shows illuminance of 1 fc average and 0.1 fc minimum in emergency mode with E4WH and VF distribution.

Grid = 10ft x 10ft

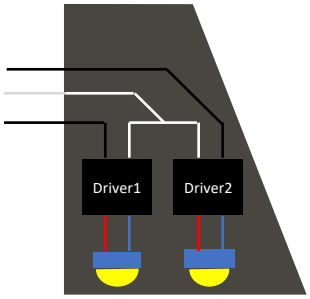


WDGE1 LED xx 40K 80CRI VF MVOLT E4WH

Dual Switching (DS) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with two drivers and two light engines. These work completely independent to each other so that a failure of any individual component does not cause the whole luminaire to go dark. This option is typically used with a back generator or inverter providing emergency power.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9



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Mounting, Options & Accessories

E4WH – 4W Emergency Battery Backup

D = 5.5"

H = 8"

W = 9"

PBBW – Surface-Mounted Back Box
Use when there is no junction box available.

D = 1.75"

H = 8"

W = 9"

AWS – 3/8inch Architectural Wall Spacer

D = 0.38"

H = 4.4"

W = 7.5"

FEATURES & SPECIFICATIONS

INTENDED USE
Common architectural look, with clean rectilinear shape, of the WDGE LED was designed to blend with any type of construction, whether it be tilt-up, frame or brick. Applications include commercial offices, warehouses, hospitals, schools, malls, restaurants, and other commercial buildings.

CONSTRUCTION
The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP66 rating for the luminaire.

FINISH
Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS
Well crafted reflector optics allow the light engine to be recessed within the luminaire, providing visual comfort, superior distribution, uniformity, and spacing in wall-mount applications. The WDGE LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine consists of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L91/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%. Luminaire comes with built in 6kV surge protection, which meets a minimum Category C low exposure (per ANSI/IEEE C62.41.2). Fixture ships standard with 0-10v dimmable driver.

INSTALLATION
A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8" Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface. The ICW option can be used to mount the luminaire inverted for indirect lighting in dry and damp locations. Design can withstand up to a 1.5 G vibration load rating per ANSI C136.31.

LISTINGS
CSA certified to U.S. and Canadian standards. Luminaire is IP66 rated. PIR options are rated for wet location. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 2700K and 3000K color temperature only and SRM mounting only.

BUY AMERICAN
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WARRANTY
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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WDGE1 LED
Architectural Wall Sconce

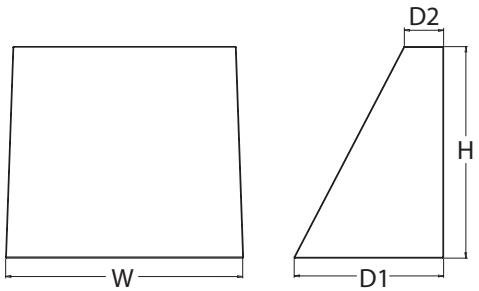
Buy American

Catalog Number	WDGE1LED-P1-40K-80CRI-VF
Notes	
Type	E2

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1): 5.5"
Depth (D2): 1.5"
Height: 8"
Width: 9"
Weight: (without options) 9 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution.

WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.

WDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K)					
				P1	P2	P3	P4	P5	P6
WDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE1 LED	P1	27K 2700K	80CRI	VF Visual comfort forward throw	MVOLT	**Shipped included**
	P2	30K 3000K	90CRI	VW Visual comfort wide	347[2]	SRM Surface mounting bracket
		35K 3500K				ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[5]
		40K 4000K				**Shipped separately**
		50K[1] 5000K				AWS 3/8inch Architectural wall spacer
						PBBW Surface-mounted back box (top, left, right conduit entry) Use when there is no junction box available.

Options

E4WH[3]	Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)
PE[4]	Photocell, Button Type
DS	Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)
DMG	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)
BCE	Bottom conduit entry for back box (PBBW). Total of 4 entry points.
BAA	Buy America(n) Act Compliant

Finish

DDBXD	Dark bronze	DDBTXD	Textured dark bronze
DBLXD	Black	DBLBXD	Textured black
DNAXD	Natural aluminum	DNATXD	Textured natural aluminum
DWHXD	White	DWHGXD	Textured white
DSSXD	Sandstone	DSSTXD	Textured sandstone

Finish selected by arch.

Accessories

Ordered and shipped separately.

WDGEAWS DDBXD	WDGE 3/8inch Architectural Wall Spacer (specify finish)
WDGE1PBBW DDBXD U	WDGE1 surface-mounted back box (specify finish)

NOTES

1. 50K not available in 90CRI.
2. 347V not available with E4WH, DS or PE.
3. E4WH not available with PE or DS.
4. PE not available with DS.
5. Not qualified for DLC. Not available with E4WH.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	27K (2700K, 80 CRI)					30K (3000K, 80 CRI)					35K (3500K, 80 CRI)					40K (4000K, 80 CRI)					50K (5000K, 80 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P1	10W	VF	1,120	112	0	0	0	1,161	116	0	0	0	1,194	119	0	0	0	1,227	123	0	0	0	1,235	123	0	0	0
		VW	1,122	112	0	0	0	1,163	116	0	0	0	1,196	120	0	0	0	1,229	123	0	0	0	1,237	124	0	0	0
P2	15W	VF	1,806	120	1	0	0	1,872	125	1	0	0	1,925	128	1	0	0	1,978	132	1	0	0	1,992	133	1	0	0
		VW	1,809	120	1	0	0	1,876	125	1	0	0	1,929	128	1	0	0	1,982	132	1	0	0	1,996	133	1	0	0

Electrical Load

Performance Package	System Watts	Current (A)				
		120V	208V	240V	277V	347V
P1	10W	0.082	0.049	0.043	0.038	--
	13W	--	--	--	--	0.046
P2	15W	0.132	0.081	0.072	0.064	--
	18W	--	--	--	--	0.056

Lumen Multiplier for 90CRI

CCT	Multiplier
27K	0.845
30K	0.867
35K	0.845
40K	0.885
50K	0.898

Lumen Output in Emergency Mode (4000K, 80 CRI)

Option	Dist. Type	Lumens
E4WH	VF	646
	VW	647

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

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Photometric Diagrams

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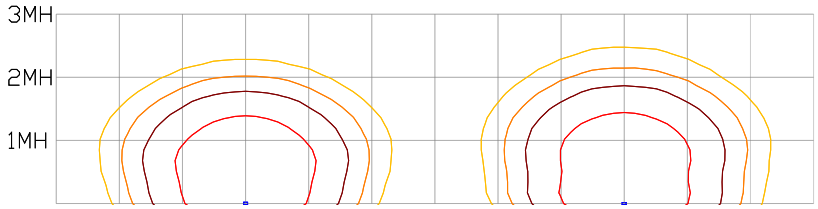
LEGEND

- 0.25 fc
- 0.5 fc
- 1.0 fc
- 3.0 fc

MH = 8ft
Grid = 8ft x 8ft



WDGE1 LED P2 40K 80CRI VW

WDGE1 LED P2 40K 80CRI VF

Emergency Egress Options

Emergency Battery Backup

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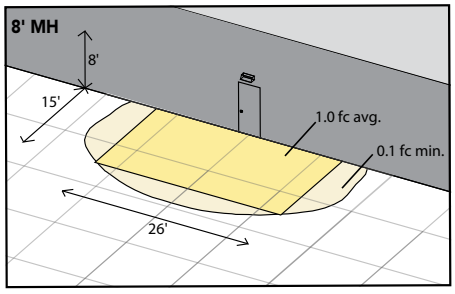

WDGE1 LED xx 40K 80CRI VF MVOLT E4WH

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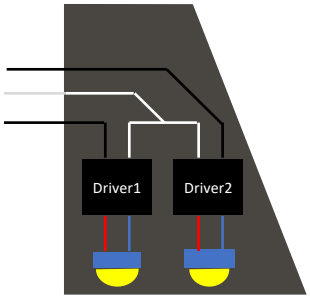

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Mounting, Options & Accessories

E4WH – 4W Emergency Battery Backup

D = 5.5"

H = 8"

W = 9"

PBBW – Surface-Mounted Back Box
Use when there is no junction box available.

D = 1.75"

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AWS – 3/8inch Architectural Wall Spacer

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W = 7.5"

FEATURES & SPECIFICATIONS

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LIGHTOLIER
by signify

Downlighting

Flat Downlight Select

4" and 6" round

Lightolier LED Flat Downlight Select provides an easy and quick downlight solution without the traditional frame and reflector. Perfect for installation in low plenum and existing shallow space ceilings. The CCT selector feature makes it easy to choose CCT at the time of installation.

Project:

Location:

Cat.No: FD6R4CCT4OOOK

Type: G1

Lamps: Qty:

Notes:

Fixture

example: FD4R4CCT

Family	Size	CCT	
FD			
FD Flat Downlight	**4R** 4-inch Round	**4CCT**	2700K ~~3000K~~ 4000K 5000K
	6R 6-inch Round		

Accessories

example: FD4NCP

Family	Model	
FD		
FD Flat Downlight	**4NCP**	4" NC Plate
	6NCP	6" NC Plate
	10EC	10 ft Extension Cable
	4TBK	4" Black Trim facia
	6TBK	6" Black Trim facia
	4TBN	4" Brushed Nickel Trim facia
	6TBN	6" Brushed Nickel Trim facia

Features

1. **Flange:** aluminum alloy, powder coating in white (RAL9003)
2. **Lens:** Diffuser is used for smooth and diffused light pattern.
3. **Junction Box:** steel, 4-1/8"x3-1/2"x1-2/9" (105mm*88mm*31mm). Clip attached on the side of the J-box to connect with fixture or new construction plate to meet NEC (National Electric Code). J-box also has key holes on the side for mounting on joist (see page 2).
4. **Connector:** locking power connection is used to connect J-box and fixture. Standard length of the connection is 11-4/5"(300mm).
5. **Ceiling cutout:** installation template on adhesive backed label is not provided.
   4" round: 4 1/3" (110mm) diameter.
   6" round: 6 2/9" (158mm) diameter.
6. **Gasket:** foam gasket supplied with fixture.

Electrical

Electronic power supply:
RoHS compliant.*
isolated driver, Grounding Class 2 Power Unit.

Remote power supply can only accommodate one LED module and cannot be shared with other LED module.

Fixture can be through wired.

Dimming: Compatible for ELV/TRIAC (120V) dimmers.

Philips SR150LED120 TRIAC (100-1%)

Leviton IPI06 TRIAC (100%-1%)

Leviton 6615P ELV (100%-5%)

Lutron DVELV-300P ELV(100%-1%)

Lutron NLV1000 TRIAC (100-1%)

Lutron PD-6WCL Wireless (100-1%)

Labels

cULus listed (UL 1598) for wet locations (covered ceiling only). IC rated for direct contact with thermal insulation.

AirSeal for minimal air leakage.

ENERGY STAR® certified.

Title 24 compliant (JA8).

Warranty

Lifetime: Expected lifetime 50,000 hours and backed by a 5-year warranty (visit signify.com/warranties for details).

	Lumen output	Input voltage	Input freq	Max. input current	Max. input power	Max. THD	Power factor	CRI
4" Round	700lm	120V	60Hz	0.10A	11W	15%	0.9	90
6" Round	900lm	120V	60Hz	0.125A	13.5W	15%	0.9	90

* Restrictions on Hazardous Substances (RoHS) is a European directive (2002/95/EC) designed to limit the content of 6 substances [lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE)] in electrical and electronic products. For products used in North America compliance to RoHS is voluntary and self-certified.

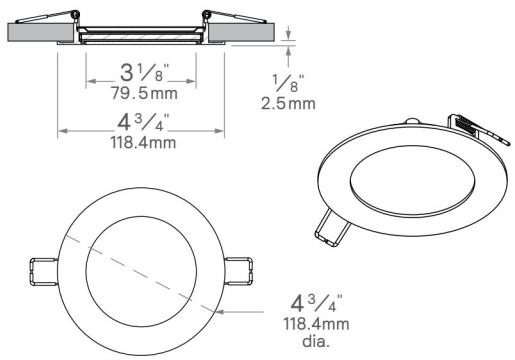
IC INSULATION CONTACT · TITLE 24 LISTED · c UL us LISTED · RoHS COMPLIANT · ENERGY STAR

Flat Downlight Select LED

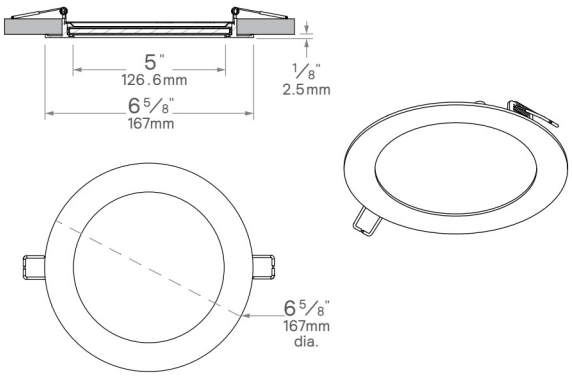
4" and 6" aperture recessed downlight

Dimensions:

Flat Downlight 4"



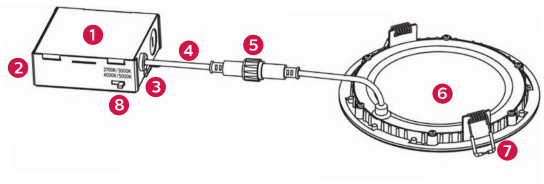
Flat Downlight 6"



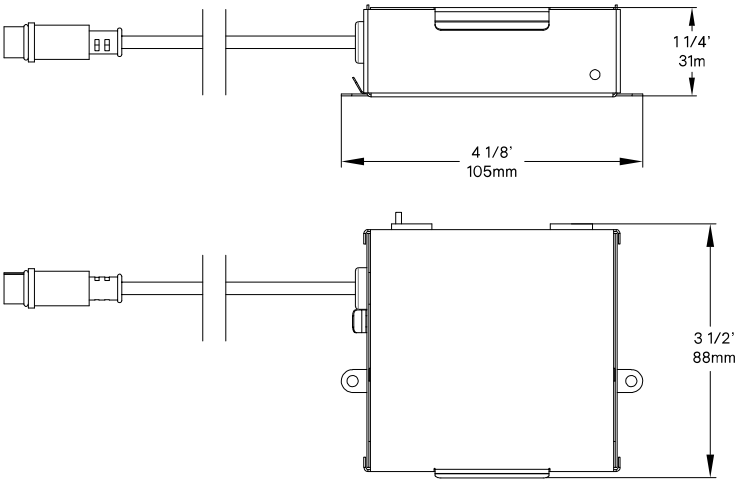
Components

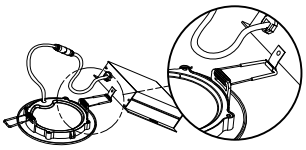
1. Electrical Box with knockouts
2. Mounting keyhole
3. Remodel NEC* clip
4. 11.8"(0.3m)cord
5. Locking power connector
6. Integrated LED Luminaire
7. Spring clip for easy mounting
8. CCT selector

*NEC = National Electric Code



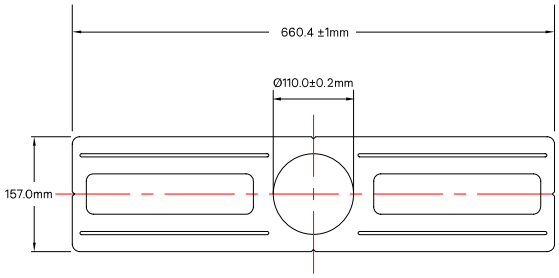
Junction box



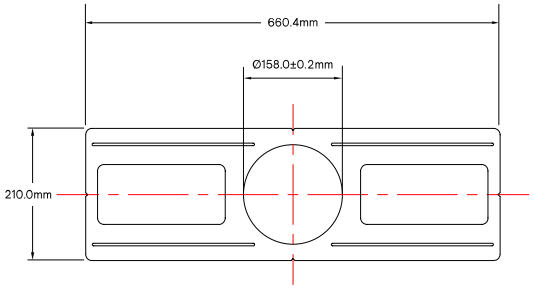


Remodeler applications: attach junction box clip to installation spring to assure NEC compliance.

4-inch NC plate



6-inch NC plate

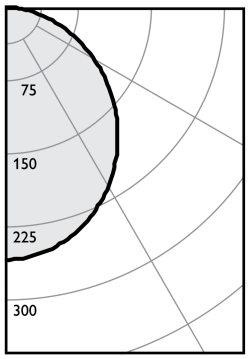


Flat Downlight Select LED

4" and 6" aperture recessed downlight

FDL 4" Round 700lm 90 2700K, 3000K, 4000K & 5000K 120V

Candela Curve



Fixture: **FD4R4CCT**

Output lumens:	700 lms
Input watts:	11 W
CRI:	90 CRI
CCT[1]:	2700K
	3000K
	4000K
	5000K
Spacing Crit.:	1.2

Zonal summary

Zone	Lumens	%Luminaire
0-30	198	28.3%
0-40	320	45.7%
0-60	555	79.3%
0-90	700	100.0%

Angle	Mean CP	Lumens
0	259	
5	258	24
10	254	
15	246	69
20	237	
25	225	104
30	212	
35	196	123
40	179	
45	161	125
50	143	
55	124	111
60	104	
65	84	83
70	65	
75	46	49
80	28	
85	11	12
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	10	6.0'
6'	7	7.2'
7'	5	8.4'
8'	4	9.6'
9'	3	10.8'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data – RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq. ft.
5'	28.0	0.49
6'	19.0	0.32
7'	13.0	0.23
8'	11.0	0.19
9'	9.0	0.15

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Efficacy: 63.6 lm/w
Report[2]: 9290022700

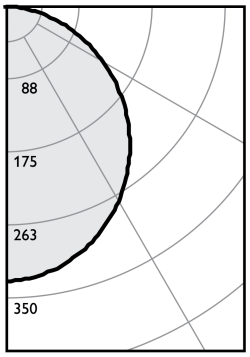
Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	109	104	99	95	101	94	97	91	93	88	83
2	99	90	83	77	88	76	85	75	81	73	69
3	90	79	71	64	77	63	74	62	72	61	58
4	82	70	61	54	69	54	66	53	64	52	49
5	75	62	53	47	61	46	59	46	57	45	43
6	70	56	47	41	55	40	53	40	52	40	37
7	65	51	42	36	50	36	48	35	47	35	33
8	60	46	38	32	46	32	44	32	43	31	29
9	56	43	34	29	42	29	41	28	40	28	26
10	53	39	31	26	39	26	38	26	37	26	24

Room Cavity Ratio

FDL 6" Round 700lm 90 2700K, 3000K, 4000K & 5000K 120V

Candela Curve



Fixture: **FD6R4CCT**

Output lumens:	900 lms
Input watts:	13 W
CRI:	90 CRI
CCT[1]:	2700K
	3000K
	4000K
	5000K
Spacing Crit.:	1.2

Zonal summary

Zone	Lumens	%Luminaire
0-30	251	27.9%
0-40	408	45.3%
0-60	712	79.1%
0-90	900	100.0%

Angle	Mean CP	Lumens
0	330	
5	327	28
10	321	
15	313	80
20	301	
25	287	122
30	270	
35	251	147
40	230	
45	208	121
50	185	
55	160	68
60	135	
65	110	40
70	85	
75	60	23
80	36	
85	9	6
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	13	6.0'
6'	9	7.2'
7'	7	8.4'
8'	5	9.6'
9'	4	10.8'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data – RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq. ft.
5'	36.0	0.58
6'	24.0	0.38
7'	17.0	0.27
8'	14.0	0.23
9'	11.0	0.18

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Efficacy: 69.2 lm/w
Report[2]: 9290022706

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	109	104	99	95	101	94	97	91	93	88	83
2	99	90	83	77	88	76	85	75	81	73	69
3	90	79	71	64	77	63	74	62	72	61	58
4	82	70	61	54	69	54	66	53	64	52	49
5	75	62	53	47	61	46	59	46	57	45	43
6	70	56	47	41	55	40	53	40	52	40	37
7	65	51	42	36	50	36	48	35	47	35	33
8	60	46	38	32	46	32	44	32	43	31	29
9	56	43	34	29	42	29	41	28	40	28	26
10	53	39	31	26	39	26	38	26	37	26	24

Room Cavity Ratio

1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

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281 Hillmount Road,
Markham, ON, Canada L6C 2S3
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LFX-XS SERIES

Outdoor Lighting

WESTGATE
THE FUTURE IS HERE...AND IT'S QUITE BRIGHT!

LFX-XS-15W-30K-KN
LFX-XS-15W-40K-KN
LFX-XS-15W-50K-KN

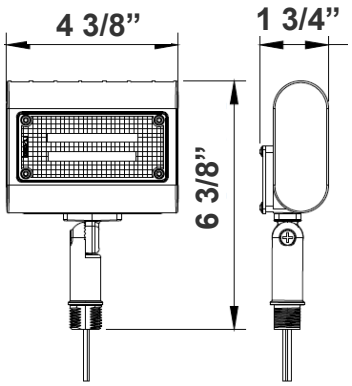
Customer Name:

Project Name:

Note: | Type: H1

SELECTION:

CUSTOM:



6 3/8”(H) x 4 3/8”(W) x 1 3/4”(D)

Ideal for general site lighting, alleys, loading docks, doorway, pathway, and parking areas.

Features

- DLC Premium & LED High-Lumen Flood lights
- Solid State Lighting Technology for Long Life
- No Maintenance Needed and High-Efficiency
- 70,000 Hours Rated Life
- 7-Year Warranty
- Optic Lens Type: III

Technical Specifications

Electrical:

- Voltage: 120~277V AC/50~60 Hz
- Wattage: 15W
- Power Factor: >0.9
- Efficacy: 130 LPW

Mechanical:

- Die-cast Aluminum Housing with Powder Coat Finish (Dark Bronze and White Finish)
- LED: Lumileds Luxeon 2835 High Flux LED
- Solid State Lighting technology for long life, no Maintenance needed and High-Efficiency
- High Conductive Aluminum LED Board
- 90° Adjustable 1/2” Knuckle Mount
- IP Rating: IP65
- Operating Temperature: -40°F to 104°F
- Suitable for Wet Locations

Lighting:

- Dimming: 0~10V Dimmable
- Optic Lens Type: III
- Cord type: 13” #18 AWG stranded wires
- Total Lumens: 1950
- Color Temperature: 3000K/ 4000K/ 5000K
- Color Rendering Index: ≥ 82
- Beam Angle: 120°X 90°

Applications:

- Ideal for general site lighting, alleys, loading docks, doorway, pathway and parking areas.
- Replace existing HID flood lights/ wall packs

Other Models:

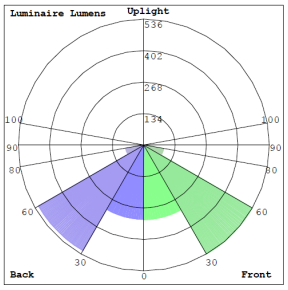
- 30W | 3880LM | LFX-SM-10-30W-30K-KN
- 30W | 3880LM | LFX-SM-10-30W-40K-KN
- 30W | 3880LM | LFX-SM-10-30W-50K-KN
- 50W | 6320LM | LFX-MD-15-50W-30K-KN
- 50W | 6320LM | LFX-MD-15-50W-40K-KN
- 50W | 6320LM | LFX-MD-15-50W-50K-KN

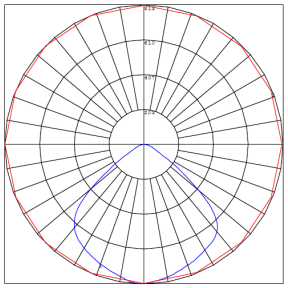
LISTED | DLC | WET LOCATION | IP65 | DIMMING

Phone: (877) 805-2252 | Fax: (877) 805-2252
www.westgatemfg.com | www.westgatecontrols.co

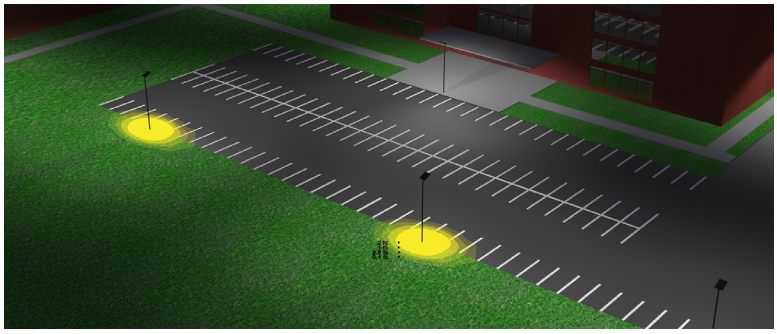
WG-ZB-Y6-2Z

Photometrics: LFX-XS-15W-KN





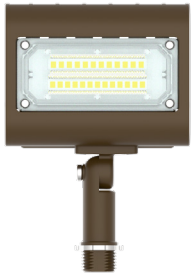
BUG Rating: B1-U0-G0



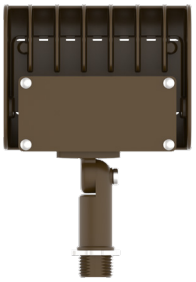
Area 30'x 45' Mounting Height: 20'

Other Views:

Side View



Front View



Back View

Performance Table: LFX-XS-15W-KN

MODEL NO.	Wattage	Voltage	Lumens	Color Temp.	BUG Rating	LPW
LFX-XS-15W-30K-KN	15W	120~277V	1950	3000K	B1-U0-G0	130
LFX-XS-15W-40K-KN	15W	120~277V	1950	4000K	B1-U0-G0	130
LFX-XS-15W-50K-KN	15W	120~277V	1950	5000K	B1-U0-G0	130

Sample Ordering

Model	Size	Wattage	Color Temp.	Mount
LFX	XS	15W		KN

30K = 3000K
40K = 4000K
50K = 5000K

Accessories Options

Blank = No Option For Accessories
WRC-3-BRZ =Weatherproof cover with three(3) 1/2" hubs

ACCESSORIES AND MOUNTING OPTIONS

WRC-3-BRZ
Weatherproof cover with Three
(3) 1/2" hubs

B-41

Mounts to landscape post
or any 1/2" hub

Fully adjustable 1/2" threaded knuckle for aiming versatility

Color Options: Custom Color Available

Black Silver White Dark Bronze (Default color) Green Red Yellow

Example:

1. LFX-SM-15W-50K-KN (For LFX 15W 5000K fixture 120V-277V)

2. LFX-SM-15W-50K-KN
   WRC-3-BRZ (For LFX 15W 5000K fixture 120V-277V)
   (Weatherproof cover with three(3) 1/2" hubs)

WESTGATE

Phone: (877) 805-2252 | Fax: (877) 805-2252
www.westgatemfg.com | www.westgatecontrols.co

Armstrong Gold® Maple

Acer rubrum 'JFS-KW78' PP 25301

Zone: 4
Height: 40'
Spread: 12'
Shape: Narrow, tightly fastigiate
Foliage: Medium green
Fall Color: Golden to orange

Selected from an evaluation of hundreds of seedlings of 'Armstrong', this cultivar improves greatly on the parent, with brighter foliage color, greater foliage density and compact, less leggy growth habit. Improved columnar form recommends it for narrow street planting sites.

J. FRANK SCHMIDT & SON CO.

P.O. Box 189 · Boring OR 97009
503-663-4128 · Fax 503-663-2121
Toll-Free 1-800-825-8202
www.jfschmidt.com

Project Bid Form

George H. Pastor & Sons
GENERAL CONTRACTING
Three Generations of Quality

34018 BEACON LIVONIA, MICHIGAN 48150
(O) 734-522-3800
(F) 734-458-1988
Email: estimating@ghpastorbids.com

Project	Taco Bell New Construction
Address	M-59 & Bogie Lake Road
	White Lake, MI
Bidding GC:	George H. Pastor & Sons

Date 2/24/2022

CSI	SITE WORK	Quantity	Unit	Unit $	Total	Comments
02000	GENERAL SITE WORK					
02070	DEMOLITION		LS		$0.00	
02110	LAND CLEARING		LS		$0.00	
02000	CONSTRUCTION ENTRANCE	1	LS	$4,500.00	$4,500.00	
02000	LAYOUT	1	LS	$5,500.00	$5,500.00	
03300	TRASH ENCLOSURE	1	LS	$22,500.00	$22,500.00	
02800	FENCING / SCREENING		LF		$0.00	
02000	EROSION CONTROL	1	LF	$7,500.00	$7,500.00	
02000	MONUMENT SIGN BASE		LS		$0.00	
02000	OTHER SITE WORK		LS		$0.00	
02000	OTHER SITE WORK		LS		$0.00	
					$40,000.00	
02200	EXCAVATION AND GRADING	Quantity	Unit	Unit $	Total	Comments
02200	STRIP		CY		$0.00	
02200	CUT		CY		$0.00	
02200	FILL		CY		$0.00	
02000	PREP GRADE		SY		$0.00	
02200	FINE GRADE		SY		$0.00	
02200	COMPACT		SY		$0.00	
02200	GRADE / COMPACT		SY		$0.00	
					$0.00	
03300	CURBS AND GUTTERS	Quantity	Unit	Unit $	Total	Comments
03300	24" CIP	1354	LF	$19.00	$25,726.00	
03300	MOUNTABLE CURB		LF		$0.00	
03300	30" DOT		LF		$0.00	
					$25,726.00	
02500	PAVING AND SURFACING	Quantity	Unit	Unit $	Total	Comments
02500	ASPHALT / CONCRETE - STD DUTY		SY		$0.00	
02500	ASPHALT / CONCRETE - HEAVY DUTY	1	SY	$92,900.00	$92,900.00	
02500	SUB BASE		SY		$0.00	
02500	BASE		SY		$0.00	
02500	SEAL / STRIPE		LS		$0.00	
02500	H/C SIGNS		EA		$0.00	
02500	WHEEL STOPS		EA		$0.00	
02500	MISC. REPAIRS		LS		$0.00	
					$92,900.00	
03300	CONCRETE ON SITE	Quantity	Unit	Unit $	Total	Comments
03300	CONCRETE WALKS	1750	SF	$6.00	$10,500.00	
03300	APPROACHES		SF		$0.00	
03300	DT LANE	3288	SF	$8.50	$27,948.00	
03300	LIGHT POLE / SIGN BASE	10	EA	$850.00	$8,500.00	
					$46,948.00	
16000	SITE ELECTRICAL	Quantity	Unit	Unit $	Total	Comments
16000	PRIMARY		LF		$0.00	
16000	SECONDARY		LF		$0.00	
16000	TELEPHONE CONDUIT		LF		$0.00	
16000	FIXTURE / POLE MATERIAL		LS		$0.00	

16000	FIXTURE / POLE LABOR		LS		$0.00	
					$0.00	
	SITE PLUMBING	**Quantity**	**Unit**	**Unit $**	**Total**	**Comments**
02600	DOMESTIC WATER SERVICE	190	LF	$65.00	$12,350.00	
02600	GAS SERVICE		LF		$0.00	
02600	SANITARY PIPING	110	LF	$55.00	$6,050.00	
02600	OUTDOOR GREASE TRAP	1	LS	$16,500.00	$16,500.00	
02700	SEPTIC SYSTEM		LS		$0.00	
02700	UNDER DRAIN		LF		$0.00	
02700	ROOF TIE-IN		LF		$0.00	
02700	STORM SEWER PIPE	450	LF	$65.00	$29,250.00	
02700	STORM SEWER BASIN / JUNCTION BOX	4	EA	$2,500.00	$10,000.00	
					$74,150.00	
02900	**LANDSCAPING**	**Quantity**	**Unit**	**Unit $**	**Total**	**Comments**
02900	LANDSCAPING - IRRIGATION SLEEVES		LS		$0.00	
02900	LANDSCAPING - SPRINKLERS MATERIAL		LS		$0.00	
02900	LANDSCAPING - SPRINKLERS LABOR		LS		$0.00	
02900	LANDSCAPING - MATERIAL		LS		$0.00	
02900	LANDSCAPING - LABOR		LS		$0.00	
02900	RETAINING WALL		LS		$0.00	
					$0.00	
	OFF-SITE IMPROVEMENTS	**Quantity**	**Unit**	**Unit $**	**Total**	**Comments**
02600	SANITARY SEWER EXTENSION		LF		$0.00	
02600	SANITARY SEWER TAP		LS		$0.00	
02600	WATER SYSTEM EXTENSION		LF		$0.00	
02600	WATER SYSTEM TAP		LS		$0.00	
02600	FIRE HYDRANT / TAP / VAULT		LS		$0.00	
02700	STORM SEWER EXTENSION		LF		$0.00	
16000	ELECTRIC SERVICE EXTENSION		LF		$0.00	
02600	GAS EXTENSION		LF		$0.00	
03300	CONCRETE WALKS - OFF-SITE		LF		$0.00	
02500	PAVING - DOT IMPROVEMENTS		SF		$0.00	
02500	SIDE/REAR ROADS - OFF-SITE		LS		$0.00	
02500	STREET CURB WORK - OFF-SITE		LF		$0.00	
02500	OTHER OFF-SITE		LS		$0.00	
					$0.00	
01000	**GENERAL CONDITIONS - SITE WORK**	**Quantity**	**Unit**	**Unit $**	**Total**	**Comments**
01000	OTHER GC - SITE WORK		LS		$0.00	NIC.
01200	SUPERVISION		LS		$0.00	
01000	OVERHEAD & PROFIT - SITE WORK		LS		$0.00	\
					$0.00	
	SITE WORK TOTAL				**$279,724.00**	

CSI	**BUILDING CONSTRUCTION**	**Quantity**	**Unit**	**Unit $**	**Total**	**Comments**
	GENERAL CONSTRUCTION					
02100	DEMOLITION		SF		$0.00	
03300	FOOTINGS/ FOUNDATION		LS		$0.00	
02200	BUILDING FILL/BUILDING EXCAVATION		CY		$0.00	
03300	CONCRETE SLAB		SF		$0.00	
07100	INSULATION		LS		$0.00	
07200	E.I.F.S. / STUCCO		SF		$0.00	
					$0.00	
04000	MASONRY	**Quantity**	**Unit**	**Unit $**	**Total**	**Comments**
04000	MASONRY PROVIDE LABOR		SF		$0.00	
04000	MASONRY MATERIAL		LS		$0.00	
					$0.00	
	STEEL	**Quantity**	**Unit**	**Unit $**	**Total**	**Comments**
05100	STRUCTURAL STEEL		LS		$0.00	
06100	TRUSS-JOISTS		LS		$0.00	
06100	HAND RAILS		LS		$0.00	

06100	ROOF LADDER		LS		$0.00	
					$0.00	
06000	CARPENTRY	Quantity	Unit	Unit $	Total	Comments
06100	ROUGH CARPENTRY - LABOR		HRS		$0.00	
06100	ROUGH CARPENTRY - MATERIALS		LS		$0.00	
06100	TRUSSES		LS		$0.00	
08000	DOORS, FRAMES AND HARDWARE LABOR		LS		$0.00	
08000	DOORS, FRAMES AND HARDWARE		LS		$0.00	
06600	F.R.P. PANELS - LABOR		LS		$0.00	
06600	F.R.P. PANELS - MATERIALS		SF		$0.00	
06200	FINISH CARPENTRY - LABOR		HRS		$0.00	
06200	FINISH CARPENTRY - MATERIALS		LS		$0.00	
05500	KITCHEN STAINLESS STEEL LABOR		LS		$0.00	
05500	KITCHEN STAINLESS STEEL		SF		$0.00	
					$0.00	
07000	ROOFING	Quantity	Unit	Unit $	Total	Comments
07510	FLAT ROOFING LABOR		LS		$0.00	
07510	FLAT ROOFING		SF		$0.00	
07501	STANDING SEAM METAL LABOR		LS		$0.00	
07501	STANDING SEAM METAL		SF		$0.00	
07700	GUTTERS AND DOWNSPOUTS LABOR		LS		$0.00	
07700	GUTTERS AND DOWNSPOUTS		LS		$0.00	
					$0.00	
08800	STOREFRONT WINDOWS AND DOORS	Quantity	Unit	Unit $	Total	Comments
08800	EXTERIOR WINDOWS AND DOOR LABOR		SF		$0.00	
08800	EXTERIOR WINDOWS AND DOOR MATERIAL		LS		$0.00	
					$0.00	
09200	DRYWALL	Quantity	Unit	Unit $	Total	Comments
09200	DRYWALL LABOR		SF		$0.00	
09200	DRYWALL MATERIAL		LS		$0.00	
					$0.00	
09500	ACOUSTIC CEILINGS	Quantity	Unit	Unit $	Total	Comments
09500	ACOUSTIC CEILINGS LABOR		SF		$0.00	
09500	ACOUSTIC CEILINGS MATERIAL		LS		$0.00	
					$0.00	
09900	PAINTING AND VINYL	Quantity	Unit	Unit $	Total	Comments
09900	VINYL WALL COVERING - LABOR		HRS		$0.00	
09900	VINYL WALL COVERING - MATERIALS		LS		$0.00	
09900	MURAL INSTALLATION		HRS		$0.00	
09900	INTERIOR PAINTING LABOR		HRS		$0.00	
09900	INTERIOR PAINTING		LS		$0.00	
09900	EXTERIOR PAINTING LAOR		HRS		$0.00	
09900	EXTERIOR PAINTING		LS		$0.00	
					$0.00	
09300	CERAMIC AND QUARRY TILE	Quantity	Unit	Unit $	Total	Comments
09300	KITCHEN FLOOR TILE - LABOR		SF		$0.00	
09300	KITCHEN FLOOR TILE - MATERIALS		SF		$0.00	
09300	DINING RM / FLOOR TILE - LABOR		SF		$0.00	
09300	DINING RM FLOOR TILE - MATERIALS		SF		$0.00	
09300	RESTROOM WALL TILE - LABOR		SF		$0.00	
09300	RESTROOM WALL TILE - MATERIALS		SF		$0.00	
					$0.00	
15000	MECHANICAL	Quantity	Unit	Unit $	Total	Comments
15300	SPRINKLERS LABOR		LS		$0.00	
15300	SPRINKLERS MATERIAL		LS		$0.00	
15700	H.V.A.C. - DUCT WORK LABOR		LS		$0.00	
15700	H.V.A.C. - DUCT WORK MATERIAL		LS		$0.00	
15700	H.V.A.C. - EQUIPMENT LABOR		HRS		$0.00	
15000	EXHAUST SYSTEM/HOOD LABOR		LS		$0.00	

15000	EXHAUST SYSTEM/HOOD MATERIAL		LS		$0.00	
15000	HOOD FIRE SUPPRESSION LABOR		LS		$0.00	
15000	HOOD FIRE SUPPRESSION MATERIAL		LS		$0.00	
15700	HVAC - UNITS & CONTROLS LABOR		TONS		$0.00	
15700	HVAC -UNITS & CONTROLS MATERIAL		LS		$0.00	
15700	WALK-IN BOX ASSEMBLY AND STARTUP		LS		$0.00	
					$0.00	
15500	PLUMBING	Quantity	Unit	Unit $	Total	Comments
15500	PLUMBING FINISH BATHROOM- LABOR		HRS		$0.00	
15500	PLUMBING FINISH BATHROOM - MATERIAL		LS		$0.00	
15500	PLUMBING KITCHEN EQUIPMENT LABOR		HRS		$0.00	
15500	PLUMBING KITCHEN EQUIPMENT MATERIAL		LS		$0.00	
15500	PLUMBING ROUGH LABOR		HRS		$0.00	
15500	PLUMBING ROUGH MATERIAL		LS		$0.00	
					$0.00	
16000	ELECTRICAL	Quantity	Unit	Unit $	Total	Comments
16000	ELECTRICAL FINISH- LABOR		HRS		$0.00	
16000	ELECTRICAL FINISH-MATERIAL		LS		$0.00	
16000	ELECTRICAL KTCH EQUIPMENT LABOR		HRS		$0.00	
16000	ELECTRIAL KTCH EQUIPMENT MATERIAL		LS		$0.00	
16000	ELECTRICAL ROUGH LABOR		HRS		$0.00	
16000	ELECTRICAL ROUGH MATERIAL		LS		$0.00	
					$0.00	
01000	GENERAL CONDITIONS	Quantity	Unit	Unit $	Total	
01200	SUPERVISION (inc. -meals- lodging- phone)		WK		$0.00	
01000	DUMPSTERS		EA		$0.00	
01500	TEMPORARY UTILITIES		WK		$0.00	
01000	JOB JOHNNY		WK		$0.00	
01000	JOB OFFICE / STORAGE		WK		$0.00	
01000	EQUIPMENT RENTAL		LS		$0.00	
01000	GENERAL LABOR		LS		$0.00	
01000	BUILDERS RISK		LS		$0.00	
01000	BLUEPRINTS		LS		$0.00	
01000	FINAL CLEANUP		LS		$0.00	
01000	SECURITY GUARD / FENCE		LS		$0.00	
01000	GC MISC. (attach breakdown sheet)		LS		$0.00	
					$0.00	
01000	NEW IMAGE ELEMENTS - INTERIOR	Quantity	Unit	Unit $	Total	Comments
01000	INSTALL CHAIR RAIL MOULDING LABOR		LF		$0.00	
01000	INSTALL CHAIR RAIL MOULDING MATERIAL		LF		$0.00	
01000	INSTALL WAINSCOT MATERIAL LABOR		SF		$0.00	
01000	INSTALL WAINSCOT MATERIAL MATERIAL		LF		$0.00	
01000	INSTALL WINDOW SILLS LABOR		LF		$0.00	
01000	INSTALL WINDOW SILLS MATERIAL		LF		$0.00	
01000	INSTALL DECORATIVE WALL TILE LABOR		SF		$0.00	
01000	INSTALL DECORATIVE WALL TILE MATERIAL		LS		$0.00	
01000	PENDANT LIGHTS - LABOR		EA		$0.00	
01000	PENDANT LIGHTS - MATERIAL		EA		$0.00	
01000	'P. LAM' INTERIOR DOORS LABOR		LS		$0.00	
01000	P. LAM' INTERIOR DOORS MATERIAL		LS		$0.00	
01000	RESTROOM PARTITIONS LABOR		LS		$0.00	
01000	RESTROOM PARTITIONS MATERIAL		LS		$0.00	
01000	DINING ROOM CEILING ELEMENT		LS		$0.00	
01000	SERVICE COUNTER LABOR		LS		$0.00	
01000	SERVICE COUNTER MATERIAL		LS		$0.00	
					$0.00	
01000	NEW IMAGE ELEMENTS - EXTERIOR	Quantity	Unit	Unit $	Total	Comments
01000	AWNINGS		LS		$0.00	
01000	ACCENT TILE D/T		LS		$0.00	
					$0.00	
01000	REGIONAL REQUIREMENTS	Quantity	Unit	Unit $	Total	Comments

01000	VESTIBULE (provide breakdown sheet)		LS		$0.00	
01000	INCREASE PARAPET HEIGHT		LS		$0.00	
01000	INCREASE BATHROOM SIZE		LS		$0.00	
01000	WINTER CONDITIONS		LS		$0.00	
					$0.00	
01000	PLAYGROUND	Quantity	Unit	Unit $	Total	Comments
01000	SAFETY SURFACING		LS		$0.00	
01000	VINYL WALL COVERING (L&M)		LS		$0.00	
01000	GLAZING		LS		$0.00	
01000	CARPENTRY		LS		$0.00	
01000	SHELL		LS		$0.00	
01000	SHELL - blue material		LS		$0.00	
01000	FINISHES (shtrock, tile, ceiling)		LS		$0.00	
01000	ROOFING - FLAT		LS		$0.00	
01000	ROOFING - STANDING SEAM METAL		LS		$0.00	
01000	HVAC		LS		$0.00	
01000	ELECTRICAL		LS		$0.00	
					$0.00	
01000	OTHER GC-CONSTRUCTION	Quantity	Unit	Unit $	Total	Comments
01000	GARAGE DOOR SUPPLY AND INSTAL		LS		$0.00	
01000	INSTALL DÉCOR		LS		$0.00	
01000	INSTALL KITCHEN EQUIPMENT		LS		$0.00	
01000	STORM SHUTTERS		LS		$0.00	
01000	OTHER GC -		LS		$0.00	
01000	Overhead		LS		$0.00	
					$0.00	
01000	OVERHEAD & PROFIT - CONSTRUCTION	Quantity	Unit	Unit $	Total	Comments
01000	OVERHEAD & PROFIT (excludes HVAC)		LS		$0.00	
					$0.00	
	BLDG CONSTR TOTAL				**$0.00**	

TOTAL PROJECT BID COST:

SITE WORK TOTAL	**$279,724.00**
BLDG CONSTR TOTAL	**$0.00**
TOTAL SITE & BLDG BI	**$279,724.00**

	ALTERNATES	Quantity	Unit	Unit $	Total	Comments
1			LS		$0.00	
2			LS		$0.00	
3			LS		$0.00	
4			LS		$0.00	
5			LS		$0.00	
6			LS		$0.00	
7			LS		$0.00	
8			LS		$0.00	
9			LS		$0.00	
10			LS		$0.00	
11			LS		$0.00	
12			LS		$0.00	
13			LS		$0.00	
14			LS		$0.00	
15			LS		$0.00	
16			LS		$0.00	
17			LS		$0.00	
18			LS		$0.00	
19			LS		$0.00	
20			LS		$0.00	

			$0.00	

NONEXCLUSIVE STORM WATER DISCHARGE AGREEMENT

THIS STORM WATER DISCHARGE AGREEMENT ("Agreement") is made this 17 day of February, 2022, by and between **MEIJER, INC.**, a Michigan corporation, of 2929 Walker Avenue N.W., Grand Rapids, Michigan 49544, Attention: Real Estate Department, hereinafter referred to as "Meijer," and **GREAT LAKES TACO LLC,** a Michigan limited liability company, whose address is 8487 Retreat Drive, Grand Blanc, Michigan 48439, hereinafter referred to as "Developer." Meijer and Developer are together hereinafter referred to as the "Parties."

RECITALS

A. Pursuant to a certain Real Estate Option Contract executed by and between the Parties (with Meijer as Seller and Developer as Buyer), Developer is or is about to become the fee simple owner of a certain parcel of land located in the Township of White Lake, Oakland County, Michigan. Said parcel of land is located on Highland Road (M-59), and is hereinafter referred to as the "Developer Parcel." The Developer Parcel contains approximately 1.068 acres of land and is legally described on the attached **Exhibit A.**

B. Meijer or an affiliated entity is the fee simple owner of a certain parcel of land located in the Township of White Lake, Oakland County, Michigan, which parcel of land is hereinafter referred to as the "Meijer Parcel." The Meijer Parcel contains approximately 67 acres of land and is located on the north side of Highland Road (M-59) west of Bogie Lake Road in White Lake Township. The Meijer Parcel is legally described on the attached **Exhibit B.**

C. The Meijer Parcel and the Developer Parcel adjoin one another. The Developer Parcel is bordered on its western and northern boundary lines by the Meijer Parcel.

D. Meijer has previously constructed a storm water system consisting of catch basins, storm water lines and related facilities, and a detention pond to provide drainage and detention of storm water generated on the Meijer Parcel, hereinafter referred to as the "Storm Water System." Developer has requested that it be permitted to discharge storm water from the Developer Parcel into the Storm Water System.

E. Meijer has agreed to grant Developer certain storm water discharge rights for the purpose of permitting the discharge of storm water from the Developer Parcel into the Storm Water System at the point approximately located on **Exhibit C** attached hereto (hereinafter the "Discharge Point") in accordance with the terms of this Agreement.

F. This easement is exempt from real estate transfer taxes pursuant to MCLA §207.505(a), and §207.526 (a), being a transfer where the value of the consideration is less than $100.

NOW, THEREFORE, in consideration of the foregoing Recitals, the execution of this Agreement by the Parties hereto, the mutual covenants and agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties hereto, it is agreed as follows:

1. Grant of Discharge Rights. Subject to Developer obtaining all necessary governmental approvals for such discharge into the Storm Water System, Meijer hereby grants to Developer (for the benefit of the Developer Parcel) the right to discharge storm water (free of debris or hazardous or regulated substances) from the Developer Parcel into the Storm Water System, as it may be configured from time to time, at the Discharge Point, at a rate not to exceed the predevelopment rate of flow for the Developer Parcel.

2. Encumbrances. The rights granted to Developer are made subject to all covenants, conditions, restrictions, encumbrances, and easements of record. Developer acknowledges that Meijer may grant other easements and encumbrances over and across the area of the Storm Water System that do not interfere with Developer's discharge rights herein granted.

3. Reservation of Rights. Meijer hereby reserves for itself, its successors and assigns, the right to use the area of the Storm Water System for any purpose which does not limit Developer's discharge rights herein granted.

4. Review of Plans. Developer shall not commence discharge of storm water into the Storm Water System until such time as Meijer is provided with, and has the opportunity to review, all engineering drawings, plans, specifications and other information as Meijer may reasonably require, including storm calculations, a site grading plan and evidence of approval of such discharge/drainage from the applicable governmental authorities. Meijer shall not unreasonably delay or withhold its approval of such plans, drawings and specifications. Provided, however, any modification to the terms of this Agreement, including but not limited to the maximum rate of flow stated in Paragraph 1 may not be amended by a plan approval and may only be modified by an amendment to this Agreement.

Developer acknowledges that Meijer shall not have an obligation to review such submittal and shall not be liable in damages or otherwise for any reason, including any mistake in judgment, negligence or nonfeasance, arising out of or in connection with the approval or disapproval or failure to approve or disapprove or failure to review any proposal submitted pursuant to this Agreement. No approval shall be considered an approval of the plans, drawings and/or specifications from an engineering perspective or a determination that they meet building, environmental or engineering design standards, are in compliance with applicable covenants or governmental requirements, or that any improvements contemplated therein have been built in accordance with such plans, drawings and/or specifications.

5. Maintenance; Manner of Work. Meijer shall maintain the Storm Water System in good order, appearance and repair in full compliance with all applicable laws and regulations and in such a manner to minimize any interference with the Developer Parcel. Notwithstanding the foregoing, Developer shall be responsible maintaining the Discharge Points in good order, appearance and repair in full compliance with all applicable laws and regulations and for the construction of any improvements /modifications to the Storm Water System required by the applicable governmental authorities arising out of the development of the Developer Parcel, subject to Meijer's review and approval of all plans and specifications associated with such work. Any such construction shall be completed by Developer in connection with its development of the Developer Parcel. Such construction (including the preparation of plans and calculations) shall be performed at the sole cost and expense of Developer, and Meijer shall not be obligated to pay for any of such work.

Meijer and Developer agree that to the extent that any party must enter upon the property of any other party in order to perform any right or obligation hereunder, the owner of such property hereby grants the party a license to enter and perform such right or obligation.

6. Payment of Annual Maintenance Fee by Fee Owner of Developer Parcel. In exchange for Meijer's agreement to maintain the Storm Water System as provided herein, Developer agrees to pay Meijer a maintenance fee (the "Maintenance Fee"), by January 15 of each year to cover costs for the calendar year in which the Maintenance Fee is paid. The obligation to pay the Maintenance Fee shall be a covenant that runs with the Developer Parcel. The 2022 calendar year Maintenance Fee shall be One Thousand Five Hundred Dollars ($1,500.00) and shall be prorated and paid upon execution of this Agreement. The Maintenance Fee shall be increased by fifteen percent (15%) every five (5) years. In addition, with respect to any modification or upgrade to the Storm Water System required by the applicable governmental authorities (other than upgrades or modifications specified in Paragraph 4(a) above), Developer agrees to reimburse Meijer five percent (5%) of all documented costs associated with such upgrade/modification. Payment shall be made to the order of Meijer. Failure to provide payment to Meijer within ten (10) days after receipt of written notice from Meijer of Developer's failure to pay shall be deemed a material breach of this Agreement.

(a) If Developer fails to pay Meijer the Maintenance Fee within the specified time period, (a) Developer shall be responsible for interest on such amount computed at the rate of the smaller of (i) eight (8%) percent per annum and (ii) the highest interest rate allowed by law, calculated monthly, from the date of any such claim by Meijer to the date of payment; (b) Meijer shall be entitled to pursue whatever remedies it may have in law or equity; and (c) Meijer shall have the right to file a lien against the Developer Parcel in the amount of the claim. Any such lien shall be considered to be akin to a mortgage lien and Meijer may foreclose upon it in the same manner as a mortgage lien. In no event shall any lien filed under this paragraph be superior to any lien of any construction mortgage utilized to facilitate the initial development of the Developer Parcel from its current status as a vacant parcel and recorded in the real property records for the Developer Parcel prior to the date Developer has completed such initial development. The provisions and requirements of the Michigan Construction Lien Act shall not apply to this lien.

7. Developer's Insurance Requirements. At all times during the term of this Agreement, Developer shall purchase and maintain the following insurance coverages: (i) Commercial General Liability including premises/operations, independent contractors, broad form property damage, personal/advertising injury, blanket contractual liability, fire and explosion legal liability, explosion/collapse/and underground hazard coverage, and products/completed operations coverage in an amount not less than Three Million Dollars ($3,000,000) per occurrence; such policy shall be an occurrence policy and not a claims-made policy. Meijer, Inc., Meijer Stores Limited Partnership and their affiliated entities must be named as an additional insured on an endorsement acceptable to Meijer, at no cost to Meijer. The additional insured endorsement shall extend coverage to the contractual liability and completed operations coverage. A copy of the additional insured endorsement is required. Developer acknowledges that Meijer may elect to increase the required coverage amount not more than once every ten years in order to continue coverage amounts consistent with Meijer's standards at such time. (ii) Automobile Liability including contractual liability coverage for all owned, hired and non-owned vehicles with a combined single limit not less than One Million Dollars single limit. (iii) Workers' Compensation coverage for its employees or contractors with statutory limits; such policy shall include an Alternate Employer endorsement. (iv) Employers' Liability coverage with limits of Five Hundred Thousand Dollars ($500,000.00). Evidence of all insurance required shall be promptly sent to the Risk Management Department, P.O. Box 3280, Grand Rapids, Michigan 49501-3280. Insurance policies shall afford primary coverage and contain a provision that the coverages afforded shall not be modified or canceled until at least ten (10) days prior written notice has been given to the Meijer Risk Management Department. All required insurance policies shall be underwritten by an insurance carrier with an A.M. Best rating of an A- or better. Compliance by Developer with the requirements in this Paragraph 7 (Developer's Insurance Requirements) as to carrying insurance and furnishing proof thereof to Meijer shall not relieve Developer of its indemnity obligations under Paragraph 9 (Indemnification). Indemnity obligations in this Agreement shall not be negated or reduced by virtue of any insurance carrier's (i) denial of insurance coverage for the occurrence or event which is the subject matter of the claim; or (ii) refusal to defend any named insured. Failure to comply with all insurance requirements shall be deemed a material breach of this Agreement. However, failure to provide evidence of existing insurance shall constitute a material breach only if Developer fails to provide such evidence within ten (10) days after written notice from Meijer that Developer has failed to provide the evidence of existing insurance.

8. Insurance Requirements for Developer's Contractors and Subcontractors. Prior to commencing any work on the Meijer Parcel, Developer shall cause its contractor(s) and subcontractor(s) to procure and keep in effect, during the course of their work in, on or about the Meijer's Parcel, the following insurance coverages:

(a) Commercial General Liability including premises/operations, independent contractors, broad form property damage, personal/advertising injury, blanket contractual liability, fire and explosion legal liability, explosion/collapse/and underground hazard coverage, and products/completed operations coverage in an amount not less than Three Million Dollars ($3,000,000) per occurrence; such policy shall be an occurrence policy and not a claims-made policy. Meijer, Inc., Meijer Stores Limited Partnership, and their affiliated entities must be named as an additional insured on an endorsement acceptable to Meijer, at no cost to Meijer. The additional insured endorsement shall extend coverage to the contractual liability and completed operations

coverage. A copy of the additional insured endorsement is required. Developer acknowledges that Meijer may elect to increase the required coverage amount not more than once every ten years in order to continue coverage amounts consistent with Meijer's standards at such time.

(b) Automobile Liability including contractual liability coverage for all owned, hired and non-owned vehicles with a combined single limit not less than One Million Dollars single limit.

(c) Workers' Compensation coverage for its employees or contractors with statutory limits; such policy shall include an Alternate Employer endorsement.

(d) Employer's Liability coverage with limits of Five Hundred Thousand Dollars ($500,000).

Evidence of all insurance required shall be promptly sent to the Risk Management Department, P.O. Box 3280, Grand Rapids, MI 49501-3280. Insurance policies shall afford primary coverage and contain a provision that coverages afforded shall not be modified or canceled until at least ten (10) days prior written notice has been given to the Meijer Risk Management Department; All required insurance policies shall be underwritten by an insurance carrier with an A.M. Best rating of an A- or better.

Notwithstanding anything to the contrary in the foregoing, Meijer shall not be responsible for verifying compliance by any contractor and/or subcontractor with the foregoing insurance requirements. Rather, it shall be Developer's sole responsibility to monitor compliance by any of its contractors and/or subcontractors with the foregoing insurance requirements. However, failure to provide evidence of existing insurance shall constitute a material breach only if Developer fails to provide such evidence within ten (10) days after written notice from Meijer that Developer has failed to provide the evidence of existing insurance.

9. Indemnification. Developer agrees to defend, indemnify and save harmless Meijer, its direct and indirect parent, subsidiaries and affiliated entities and their respective officers, directors, shareholders, agents and employees (hereafter collectively "Related Parties"), from and against any and all liability or claim thereof (including but not limited to reasonable actual attorney fees and costs) whether for injury to persons, including death, or damage to property, which may be imposed upon, incurred by or asserted against Meijer or its Related Parties: (i) allegedly or actually arising in connection with or as a direct or indirect result of any activity by Developer, its employees, agents, contractors, subcontractors, lessees, invitees, or licensees in, on, or about Meijer Parcel including use of the Storm Water System; (ii) arising out of any default by Developer under this Agreement; or (iii) arising out of any negligent act or omission to act by Developer, its agents, employees, contractors or subcontractors. The foregoing indemnity from Developer shall to the extent permitted by law include claims alleging or involving joint or comparative negligence, but shall not extend to liability directly resulting only from the sole negligence of Meijer or its Related Parties. Developer agrees to give Meijer the right to approve or select counsel for defending Meijer against any and all claims, liability and damages covered by this indemnity provision.

10. Covenants Running with the Land. The rights herein granted and the agreements herein contained shall be rights and covenants running with the land and shall inure to the benefit of, and be binding upon, the Parties hereto and their respective successors and assigns.

11. Notices. Notices permitted or required hereunder shall be in writing and shall be delivered or sent by certified mail or overnight delivery by a reputable national carrier to the addresses provided below, (except however, insurance certificates are to be mailed as provided in Paragraphs 7 and 8 above) provided that any party may change such address by written notice to the other party:

If to Developer	Great Lakes Taco LLC 8487 Retreat Drive Grand Blanc, Michigan 48439 Attention: Louis C. Dortch, Jr.
With a copy to:	George F. Rizik, II Rizik & Rizik 9400 South Saginaw Street, Suite E Grand Blanc, Michigan 48439
If to Meijer	Meijer Real Estate Department 2929 Walker NW Grand Rapids, Michigan 49544
with a copy to:	Meijer Legal Department 2929 Walker NW Grand Rapids, Michigan 49544

12. Governing Laws. This Agreement shall be construed in accordance with the laws of the State of Michigan and any applicable federal laws and regulations.

13. Waiver of Default. No waiver of any default by any party to this Agreement shall be implied from any omission by any other party to take any action in respect of such default. No express waiver of any default shall affect any default or cover any period of time other than the default and period of time specified in such express waiver. One or more waivers of any default in the performance of any term, provision or covenant contained in this Agreement shall not be deemed to be a waiver of any subsequent default in the performance of the same term, provision or covenant or any other term, provision or covenant contained in this Agreement. The rights and remedies given to any party to this Agreement shall be deemed to be cumulative and no one of such rights and remedies shall be exclusive of any of the others, or of any other right or remedy at law or in equity which any such party might otherwise have by virtue of a default under this Agreement, and the exercise of one such right or remedy by any such party shall not impair such party's standing to exercise any other right or remedy.

14. Exhibits. All exhibits referred to herein and attached hereto shall be deemed part of this Agreement.

15. Severability. If any term, provision or condition contained in this Agreement shall, to any extent, be invalid or unenforceable, the remainder of this Agreement (or the application of such term, provision or condition to persons or circumstances other than those in respect of which it is invalid or unenforceable) shall not be affected thereby, and each term, provision or condition of this Agreement shall be valid and enforceable to the fullest extent permitted by law provided that such deletions can be made without materially changing the basic agreement between the parties. If such deletions cannot be made without materially changing the basic agreement between the parties, then the parties agree to amend, or to permit the court to amend, this Agreement to accomplish essentially the same transaction without said illegal, invalid or unenforceable provisions.

16. Not a Public Dedication. Nothing herein contained shall be deemed to be a gift or dedication of any portion of the Meijer Parcel to the general public or for the general public or for any public purpose whatsoever, it being the intentions of the parties hereto that this Agreement be strictly limited to and for the purposes herein expressed.

17. Attorney's Fees. If litigation arises out of or in connection with this Agreement, the prevailing party shall be entitled to recover its attorney's fees

18. Counterparts. This Agreement may be executed by the Parties on any number of separate counterparts and all such counterparts so executed constitute one agreement binding on the Parties, notwithstanding that all Parties are not signatories to the same counterpart.

[The remainder of this page was intentionally left blank.]

IN WITNESS WHEREOF, the parties have executed this Nonexclusive Storm Water Discharge Agreement as of the day and year first above written.

MEIJER, INC.

By: _____
Michael Flickinger
Its: Vice President-Real Estate

Legal AM
Bus. ML
Bus. KA

STATE OF MICHIGAN)
) ss.
COUNTY OF KENT)

The foregoing instrument was acknowledged before me this 15TH day of February, 2022, by Michael Flickinger, the Vice President-Real Estate of Meijer, Inc., a Michigan corporation, for and on behalf of said corporation.

_____
Notary Public
State of Michigan, County of Ottawa
My commission expires: 2-17-23
Acting in the County of Kent.

LARAE B STEIGENGA
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF OTTAWA
My Commission Expires February 17, 2023
Acting in Kent County, MI

(Signatures continue on following page)

GREAT LAKES TACO LLC

By: _____

Printed Name: Louis C Dortch Jr

Its: CEO

STATE OF Michigan)
) ss.
COUNTY OF Genesee)

The foregoing instrument was acknowledged before me this 14 day of February, 2022, by Louis C Dortch Jr, the CEO of Great Lakes Taco LLC, a Michigan limited liability company, for and on behalf said limited liability company.

ANGELA KULZA
NOTARY PUBLIC, STATE OF MI
COUNTY OF GENESEE
MY COMMISSION EXPIRES May 22, 2022
ACTING IN COUNTY OF Genesee

_____
Notary Public
State of Michigan County of Genesee.
My commission expires: May 22, 2022
Acting in the County of Genesee.

DRAFTED BY AND
WHEN RECORDED RETURN TO:
Aaron Morrissey, Atty.
2929 Walker Avenue, N.W.
Grand Rapids, MI 49544
(616) 791-3002

EXHIBIT A
TO
NONEXCLUSIVE STORM WATER DISCHARGE AGREEMENT

Legal Description of Developer Parcel

LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH-SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 118.86 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 85 DEGREES 18 MINUTES 14 SECONDS EAST, 118.86 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00 DEGREES 01 MINUTE 09 SECONDS WEST, 236.61 FEET; THENCE 94.59 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 533.50 FEET, CHORD BEARING AND DISTANCE OF NORTH 05 DEGREES 00 MINUTES 27 SECONDS WEST, 94.46 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST, 147.67 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST, 338.00 FEET; THENCE 137.67 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF NORTH 86 DEGREES 36 MINUTES 27 SECONDS WEST, 137.67 FEET TO THE POINT OF BEGINNING.

Part of Tax Parcel Number: 12-20-276-036 (formerly part of 12-20-276-033)

EXHIBIT B
TO
NONEXCLUSIVE STORM WATER DISCHARGE AGREEMENT

Legal Description of the Meijer Parcel

A PART OF THE NORTH 1/2 OF SECTION 20, T3N-R8E, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS BEGINNING AT THE INTERSECTION OF THE NORTH-SOUTH 1/4 LINE OF SAID SECTION 20 WITH THE NORTHERLY RIGHT-OF-WAY LINE OF HIGHLAND ROAD (M-59) WHICH IS N00°31'08"E, 198.92 FEET FROM THE CENTER OF SAID SECTION 20; THENCE FROM SAID POINT OF BEGINNING S89°58'09"W ALONG SAID RIGHT-OF-WAY LINE, 662.41 FEET; THENCE N00°10'23"W, 164.03 FEET; THENCE N00°26'47"E, 1235.97 FEET; THENCE S89°58'09"E, 665.95 FEET TO SAID NORTH-SOUTH 1/4 LINE OF SECTION 20; THENCE N00°31'08"E ALONG SAID LINE, 420.30 FEET; THENCE N89°55'00"E, 867.22 FEET; THENCE S08°28'00"W ALONG THE WESTERLY LINE OF A DETROIT EDISON PARCEL, 480.02 FEET; THENCE CONTINUING ALONG SAID WESTERLY LINE S00°39'06"W, 1353.01 FEET TO SAID NORTHERLY RIGHT-OF-WAY LINE OF HIGHLAND ROAD; THENCE ALONG SAID RIGHT-OF-WAY LINE ON A CURVE TO THE LEFT WITH A RADIUS OF 5821.58 FEET, A CENTRAL ANGLE OF 02°44'10" AND A LONG CHORD BEARING AND DISTANCE OF N88°39'46"W, 277.97 FEET; THENCE CONTINUING ALONG SAID RIGHT-OF-WAY LINE S89°58'09'W, 519.78 FEET TO THE POINT OF BEGINNING; CONTAINING 55.1685 GROSS AND NET ACRES.

EXCEPTING THEREFROM THE FOLLOWING PARCEL:

A part of the Northeast ¼ of Section 20, T3N-R8E, White Lake Township, Oakland County, Michigan, described as beginning at a point which is N00°31'08"E along the North-South ¼ line of said Section 20, 198.92 feet and N89°58'09"E along the northerly right-of-way line of Highland Road (M-59), 519.78 feet and continuing along said right-of-way line along a curve to the right with a radius of 5821.58 feet, a central angle of 02°44'10" and a long chord bearing and distance of S88°39'46"E, 277.97 feet and N00°39'06"E along the westerly line of Detroit Edison Parcel, 1353.01 feet and N08°28'00"E along said westerly line, 277.77 feet from the center of said Section 20; thence from said Point of Beginning S89°55'06"W, 172.18 feet; thence N00°04'59"W, 200.00 feet; thence N89°55'00"E, 202.25 feet; thence S08°28'00"W, along said westerly line, 202.25 feet to the Point of Beginning; containing 0.860 gross and net acre.

TOGETHER WITH:

Commencing at the Center Post of Section 20, T3N, R8E, White Lake Township, Oakland County, Michigan; said point being S89°59'45"W 2635.27 feet from the East 1/4 corner of said Section 20; thence N00°31'08"E 198.92 feet along the North-South 1/4 line of said Section 20; thence N89°58'09"E 519.78 feet along the Northerly right-of-way line of M-59 (Highland Road, variable width); thence 513.36 feet along the arc of a 5821.58 foot radius circular curve to the right, chord bearing S87°30'16"E 513.20 feet along the Northerly right-of-way line of said M-59 for a **PLACE OF BEGINNING**; thence N00°39'06"E 981.32 feet; thence N90°00'00"E 156.11 feet (recorded as 156.53 feet); thence N63°45'10"E 76.30 feet; thence N83°08'44"E 68.91 feet; thence S73°02'19"E

100.53 feet; thence S50°34'37"E 136.92 feet; thence S50°09'11"E 120.23 feet (recorded as 120.32 feet); thence S50°21'46"E 66.40 feet; thence S32°53'46"E 42.85 feet; thence N90°00'00"E 49.43 feet (recorded as 49.01 feet); thence S00°19'28"W 812.21 feet; thence 256.53 feet along the arc of a 5637.58 foot radius circular curve to the right, chord bearing N86°00'13"W 256.51 feet along the Northerly right-of-way line of said M-59; thence N84°42'00"W 51.36 feet along the Northerly right-of-way line of said M-59; thence N01°30'56"E 30.03 feet; thence S88°29'04"E 63.50 feet; thence N03°10'30"W 150.32 feet; thence 234.17 feet along the arc of a 966.50 foot radius circular curve to the left, chord bearing N19°25'09"W 233.59 feet; thence S60°22'37"W 36.86 feet; thence 120.47 feet along the arc of a 233.00 foot radius circular curve to the right, chord bearing S75°11'17"W 119.13 feet; thence S90°00'00"W 15.98 feet; thence S01°30'56"W 332.20 feet; thence N84°42'00"W 189.40 feet along the Northerly right-of-way line of said M-59; thence 28.38 feet (recorded as 28.28 feet) along the arc of a 5821.58 foot radius circular curve to the left, chord bearing N84°52'11"W 28.38 feet (recorded as N84°50'21" 28.28 feet) along the Northerly right-of-way line of said M-59 to the Place of Beginning, containing 14.017 acres of land, more or less, being subject to easements, conditions, restrictions and exceptions of record, if any.

EXCEPTING THEREFROM:

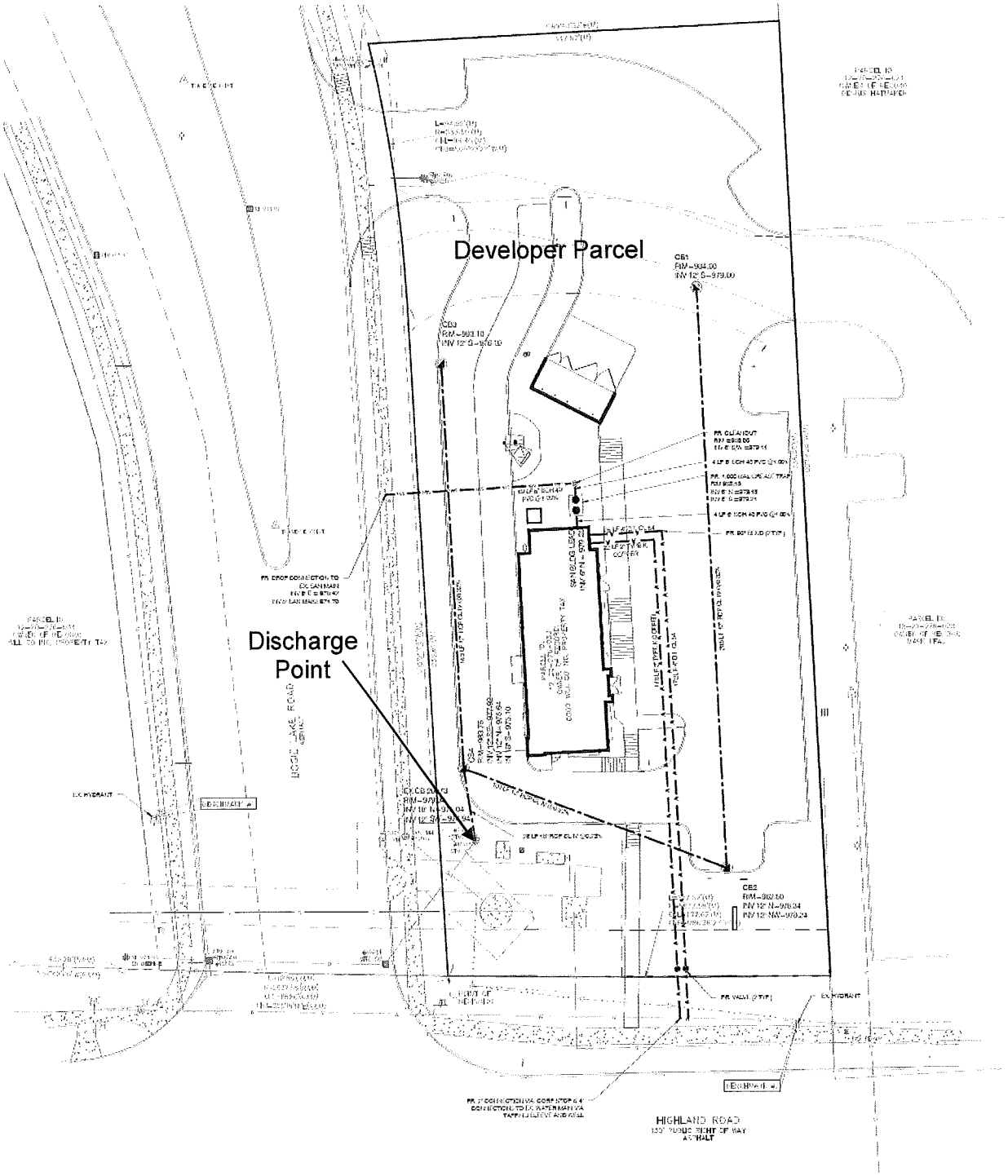
LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH-SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 118.86 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 85 DEGREES 18 MINUTES 14 SECONDS EAST, 118.86 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00 DEGREES 01 MINUTE 09 SECONDS WEST, 236.61 FEET; THENCE 94.59 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 533.50 FEET, CHORD BEARING AND DISTANCE OF NORTH 05 DEGREES 00 MINUTES 27 SECONDS WEST, 94.46 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST, 147.67 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST, 338.00 FEET; THENCE 137.67 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF NORTH 86 DEGREES 36 MINUTES 27 SECONDS WEST, 137.67 FEET TO THE POINT OF BEGINNING.

Tax Parcel No.: Y-12-20-251-019 and Y-12-20-276-035 (formerly part of 12-20-276-033)
Property Address: 6001 Highland Road, White Lake, Michigan 48383

EXHIBIT C
TO
NONEXCLUSIVE STORM WATER DISCHARGE AGREEMENT

Illustration of the Discharge Point



PLANNED BUSINESS DEVELOPMENT AGREEMENT

This Planned Business Development Agreement ("Agreement") is made this _____ day of May, 2022 ("Effective Date"), by Great Lakes Taco LLC, a Michigan limited liability company (herein "Developer" and "Owner"), whose address is 8487 Retreat Dr., Grand Blanc, MI 48439, and the Charter Township of White Lake, a Michigan municipal corporation ("Township"), whose address is 7525 Highland Road, White Lake, MI 48383.

Recitals

A. Developer owns real estate situated in the Township, more particularly described on Exhibit A (the "Property").

B. Developer has applied to the Township to establish the Property as a Planned Business development ("PBD"), pursuant to provisions of the Township Zoning Ordinance.

C. The Property is zoned Planned Business District.

D. Section 6.7.B of the Township Zoning Ordinance provides for the execution of a development agreement between the Developer and the Township.

E. On January 6, 2022, the Planning Commission recommended approval of the Preliminary Site Plan, subject to conditions, after holding a public hearing.

F. On January 18, 2022, the Township Board approved the Preliminary Site Plan for the Development, subject to addressing all comments and recommendations of staff, consultants, Planning Commission and the Community Development Department Director.

G. On _____ the Planning Commission approved the Final Site Plan ("PBD Plans")

H. On _____ the Township Board determined the Development qualifies for PBD Development in accordance with the Township Zoning Ordinance, Section 6.7, and approved the entry, execution and recording the this Agreement

I. By entering into this Agreement, the parties desire to set forth their respective obligations with respect to the PBD and the conditions under which the Township has granted final PBD approval. The Township is willing to establish the property as a PBD and Developer is willing to develop and maintain the PBD, subject to the terms and conditions of this Agreement.

_____
Developer's Initials

_____
Township's Initials

NOW, THEREFORE, Developer and Township hereby declare that the Property is and shall be held, transferred, sold, conveyed and occupied, subject to any covenants, conditions, easements, restrictions, grants, and reservations set forth herein; all of which covenants, conditions, easements, restrictions, grants and reservations are for the benefit of and shall run with and bind the Property and all parties having any right, title or interest in any or all portion of the Property, or any improvements therein, as well as their heirs, successors, personal representatives, and assigns.

ARTICLE I

DEFINITIONS

1.1 "Developer" shall mean Great Lakes Taco, LLC, a Michigan limited liability company, and its successors and assigns.

1.2 "Owner" shall mean the holder or holders of record fee simple title to any portion of the Property. The term "Owner" shall include any grantee or lessee to all or any portion of the Property. If more than one person owns fee simple title to any portion of the Property, then the interest of all such persons, collectively, shall be that of one "Owner".

1.3 "Person" shall mean any individual, partnership, corporation, limited liability company, trust, or any other form of business or governmental entity.

1.4 "PBD Plan" shall mean the final PBD site plan and related plans and specifications approved by and on file with the Township, attached as Exhibit B.

1.5 "PBD Conditions" shall mean the conditions established and required by the Township Board in connection with its approval of the PBD Plan and rezoning, as listed on Exhibit C.

ARTICLE II

ESTABLISHMENT OF PBD AND PBD PLANS

2.1 Approved Final PBD Plan; Exhibits. The PBD plan, dated _____, 2022, has been approved by the Township as a final PBD site plan under the Township Zoning Ordinance. The PBD site plan approval grants Owner and/or Developer the right to construct facilities as set forth in the PBD site plan, subject to obtaining permits for said construction in the ordinary course. All exhibits attached hereto are incorporated herein and made a part hereof by reference.

2.2 Statement of Planning Objectives to be Achieved by the Development. Developer has purchased the Property from Meijer Inc., in order to design, build, and operate a single-building, state of the art, franchised Taco Bell® restaurant with parking, on-site service and consumption and drive-through service window(s)/station(s). The development will serve the local community and passing traffic along Highland Road. The building and all improvements will be developed, constructed, operated and maintained in accordance with all township ordinances and regulations, and shall incorporate brick elements as well as required Taco Bell® branding in order to create a desirable aesthetic. Developer will build and use an easement drive on the north side of their property to accommodate traffic between McDonalds and Bogie Lake Road. This easement will

_____
Developer's Initials

_____
Township's Initials

also accommodate traffic from Nordic Drive and the Koby property to the east of McDonalds. This drive is currently being used by motorists but is a rutted two lane dirt drive, the new, paved drive will benefit all parties. Developer will also beautify the existing lift station at the corner of Bogie Lake Road and Highland Road using landscaping and will also paint the structure if allowed by ordinance. Developer is working and will continue to work with the owners of the two parcels to the east to obtain a three-party cross access easement agreement. The northerly access will be constructed with the initial development, regardless of the status of the three-party cross access easement agreement. Developer will commit $5,000.00 to the White Lake Township pathway fund in lieu of the provision of an improvement.

2.3 Development Schedule. The proposed approximate development schedule for the development of Property is attached as Exhibit D, which may be modified by Developer as necessary or appropriate, with the Township's consent.

2.4 Statement of Developer's Intentions Regarding Future Sale or Lease. The Developer intends to be an owner-operator on the Property; but also intends to sell or transfer the Property to a third party Person in the future. Developer may also transfer the Property to an affiliate of Developer for leasing to the Developer or another Person, subject to the terms of this Agreement. Nothing in this Agreement shall preclude, prohibit or restrict any sale, transfer, conveyance or mortgage of the Property to any Person.

2.5 Adherence to Ordinances. Except as otherwise provided herein, Developer and Owner shall adhere to the Ordinances of the Township. To the extent that developing the property in accordance with the PBD Plan will deviate from the Township Zoning Ordinance or any other ordinance, resolution, rule or regulation of the Township, currently in effect or which may be adopted in the future, the Township shall be deemed to have granted, and hereby grants, all such deviations.

2.6 Traffic Impact Study. The Traffic Impact Study requirement for this project has been waived by the Township.

2.7 Community Impact Statement. The Community Impact Study requirement for this project has been waived by the Township.

2.8 Performance Criteria. Developer and Owner affirmatively submit that the proposed uses on the Property shall not exceed the performance criteria found in the Zoning Ordinance in the standards listed in Article 5, Section 18 of the Ordinance.

2.9 Waivers. Developer has requested certain deviations or waivers from provisions of the Ordinance, which shall be deemed as granted by the Township upon execution of this Agreement. Those deviations and waivers are set forth in Exhibit E, which is made a part of this Agreement.

_____
Developer's
Initials

_____
Township's
Initials

ARTICLE III

CONDITIONS, PERMITS AND STIPULATIONS

3.1 Permits and Authorizations. All state, county and federal permits required for completion of the project shall be approved prior to the scheduling of a pre-construction meeting with Developer and the Township staff and consultants. The following permits and approvals are required:

3.1.1 Permit from the Oakland County Road Commission for all work within the Bogie Lake Road Right-Of-Way;

3.1.2 Permit from the MDOT for work within the M-59/Highland Road Right-Of-Way;

3.1.3 SESC permit from the OCWRC;

3.1.4 Sanitary Sewer Permit from the OCWRC for work on and connection to the existing sanitary sewer;

3.1.5 Executed Stormwater Maintenance Agreement, or modification to the existing Meijer agreement adding these storm sewer improvements;

3.1.6 Building Permit from the White Lake Twp. Building Department; and

3.1.7 Health Department Permit from the Oakland County Health Department

3.2 Improvements and Alterations. Developer shall not engage in any improvements or alterations on the Property, including, without limitation, site grading work or installation of utilities, until completion of the pre-construction meeting.

3.3 Conditions. The conditions attached by the Township Board for approval of the PBD Plan, as listed on Exhibit C attached hereto, are incorporated into the Township's PBD approval. Any violation of these conditions shall be considered a breach of this Agreement.

ARTICLE IV

ACTION BY THE TOWNSHIP

4.1 Maintenance of Property. In the event Developer or Owner fail at any time to maintain the Property in a first class condition, using commercially reasonable standards consistent with the approved site plan and this Agreement, the Township may serve written notice upon Owner setting forth the manner in which Developer or Owner have failed to maintain the Property, and such notice shall include a demand that deficiencies be cured within a stated reasonable time period no less than sixty (60) days, and shall set forth the date, time and place of a hearing before the Township Board for the purpose of allowing Owner to be heard as to why the Township should not proceed to perform the maintenance which has not been undertaken. In that hearing, the time for curing such deficiencies and the hearing itself may be extended. If, following the hearing, the Township Board shall determine that the deficiency has not been cured within the time specified at the hearing, then upon five (5) days written notice to Owner, the Township shall thereupon have the power and authority, but not the obligation, to enter upon the Property or cause its agents or contractors to enter upon

_____
Developer's Initials

_____
Township's Initials

the Property to cure such deficiency as reasonably found by the Township to be appropriate and/or necessary, in a manner so as to reasonably minimize any interference with the business operations on the Property and the cost and expense of such curative action, including the cost of notices by the Township and reasonable legal, planning, and engineering fees and costs incurred by the Township, shall be paid by the Owner. Such amount shall constitute a lien on the Property and the Township may require such costs and expenses to be paid prior to the commencement of work. If such costs and expenses have not been paid within sixty (60) days of a billing to the Owner, all unpaid amounts may be a) placed on a delinquent tax roll of the Township as to the Property and shall accrue interest and penalties and shall be collected as and shall be deemed delinquent real property taxes according to the laws made and provided for the collection of delinquent real property taxes in the discretion of the Township; or b) assessed against the Owner and collected as a special assessment on the next annual Township tax roll; or c) collected by use of the applicable provisions of Michigan law providing for foreclosure by advertisement, the Owner having specifically granted the Township the required power of sale to do so; or d) collected by suit against the Owner. If suit is initiated, the Owner shall pay all the Township's legal fees and costs. The selection of remedy shall be at the sole option of the Township, and election of one remedy shall not waive the use of any other remedy.

4.2 Other. The Developer shall be required to repair/replace any broken sections of concrete within the frontage sidewalks adjacent to the site along Bogie Lake Road and Highland Road, as determined by the Township Engineering Consultant,

4.3 Breach. Any breach of this Agreement, the PBD Plan, or any other document governing the development shall constitute a nuisance *per se* which shall be abated. The parties therefore agree that, in the event of a breach of this Agreement by Owner or Developer, the Township, in addition to any other relief to which it may be entitled at law or in equity, shall be entitled under this Agreement to an order of a court of competent jurisdiction providing for relief in the form of injunctive relief or specific performance requiring abatement of the nuisance *per se.*

ARTICLE V

MISCELLANEOUS

5.1 Binding Effect. This Agreement shall be binding upon and inure to the benefit of the parties, their heirs, successors and assigns. The rights and obligations contained in this Agreement shall run with the property.

5.2 Authority. This Agreement has been duly authorized by all necessary action of the Developer, the Owner and the Township. By execution of this Agreement, the parties each warrant that they have the authority to execute this Agreement and bind the Property and the respective entities to its terms and conditions.

5.3 Amendment. This Agreement shall only be amended pursuant to an instrument executed by the Township, Owner and Developer, or their successor in title. No consent to the amendment of this Agreement shall be required from any other person, including mortgagees.

_____
Developer's
Initials

_____
Township's
Initials

5.4 Validity. Invalidation of any of the provisions contained in this Agreement, or of the application thereof to any person by judgment or court order shall in no way affect any of the other provisions herein or the application thereof to any other person. The same shall remain in full force and affect.

5.5 Partnership. None of the terms or provisions of this Agreement shall be deemed to create a partnership or joint venture between Developer and the Township.

5.6 Time. Time is of essence to this Agreement, subject to the provisions of this Agreement captioned "Force Majeure."

5.7 Waiver. Failure of either party to insist upon strict performance of any of the terms, conditions or covenants hereof shall not be deemed to be a waiver of any rights or remedies that such party may have hereunder, at law or in equity, and shall not be deemed a waiver of any subsequent breach or default under this Agreement. No waiver by either party of any default under this Agreement shall be effective or binding unless made in writing and no such waiver shall be implied from any omission by the party to take an action with respect to the default. No express written waiver of any default shall affect any other default or cover any other period of time, and one or more written waivers of any default shall not be deemed to be a waiver of any subsequent default in performance of the same or any other term or provision contained in this Agreement.

5.8 The Township ZBA shall have no jurisdiction over the Property or the application of the Agreement.

5.9 This Agreement shall be governed by the laws of the State of Michigan and in the event of any litigation related to the Agreement or the PBD, venue shall be in and to the exclusive jurisdiction of the courts in Michigan, including the Federal District Court for the Eastern District of Michigan.

5.10 Violations. Violations of the provisions of this Agreement shall be deemed to be violations of the Township Zoning Ordinance and shall entitle the Township to all the rights and remedies provided by the Zoning Ordinance or any other applicable law for such violation.

5.11 Notice. This PBD Agreement shall be recorded by the Township at the Office of the Oakland County Register of Deeds.

5.12 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original and all such counterparts shall constitute one and the same instrument.

5.13 At the time of execution of this Agreement, the Developer will not have yet obtained engineering approvals for the Development. Additional conditions may be imposed in connection with engineering approvals, provided that no such conditions be inconsistent with the PBD Plan or this Agreement and shall not change or eliminate any development right authorized thereby. Those conditions shall be incorporated into and made part of this Agreement automatically upon issuance of said conditions.

_____
Developer's
Initials

_____
Township's
Initials

Recording of the original executed Agreement shall be completed by the Township and all recording fees shall be paid by the Developer.

The undersigned have executed this Agreement effective as of the day and year first written above.

DEVELOPER:

Great Lakes Taco LLC,
a Michigan limited liability company

By:_____
Louis C. Dortch Jr., its manager

STATE OF MICHIGAN)
) SS
COUNTY OF GENESEE)

The foregoing PBD Agreement was acknowledged before me on _____, 2022, by Louis C. Dortch Jr., the manager of Great Lakes Taco LLC, a Michigan limited liability company

_____

Prepared by and when recorded return to:
George F. Rizik, II (P30595)
Rizik & Rizik
9400 S. Saginaw St., Suite E
Grand Blanc, MI 48439
Telephone: 810-953-6000

_____
Developer's
Initials

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Township's
Initials

TOWNSHIP:

CHARTER TOWNSHIP OF WHITE LAKE
a Michigan municipal corporation

By:_____
Rik Kowall, Its: Supervisor

By:_____
Anthony L. Noble, Its: Clerk

STATE OF MICHIGAN)
) ss
COUNTY OF OAKLAND)

The foregoing PBD Agreement was acknowledged before me this _____ day of _____, 2022, by Rik Kowall, Supervisor and Anthony L. Noble, Clerk of the Charter Township of White Lake, a Michigan municipal corporation, on behalf of said municipal corporation.

_____

, Notary Public
, County, Michigan
Acting in _____ County, Michigan
My commission expires:

_____
Developer's
Initials

_____
Township's
Initials

EXHIBIT A
(PBD PROPERTY DESCRIPTION)

EXHIBIT B
(THE PBD PLAN)

EXHIBIT C
(TOWNSHIP SPECIAL CONDITIONS)

EXHIBIT D
(DEVELOPMENT SCHEDULE)

EXHIBIT E
(APPROVED FINAL PBD DEVIATIONS AND WAIVERS)

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Developer's
Initials

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Township's
Initials

EXHIBIT A
(PBD PROPERTY DESCRIPTION)

LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:
A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH-SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 118.86 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 85 DEGREES 18 MINUTES 14 SECONDS EAST, 118.86 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00 DEGREES 01 MINUTE 09 SECONDS WEST, 236.61 FEET; THENCE 94.59 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 533.50 FEET, CHORD BEARING AND DISTANCE OF NORTH 05 DEGREES 00 MINUTES 27 SECONDS WEST, 94.46 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST, 147.67 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST, 338.00 FEET; THENCE 137.67 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF NORTH 86 DEGREES 36 MINUTES 27 SECONDS WEST, 137.67 FEET TO THE POINT OF BEGINNING.

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Developer's Initials

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Township's Initials

DESCRIPTION OF SITE PLAN AND RELATED PLANS AND SPECIFICATIONS

C1.0 COVER SHEET
1 TOPOGRAPHIC SURVEY
C2.0 DEMOLITION PLAN
C3.0 SITE LAYOUT & PAVING PLAN
C3.1 FIRE TRUCK ACCESS PLAN
C4.0 GRADING PLAN
C5.0 UTILITY PLAN
C6.0 PROFILE PLAN
C7.0 SOIL EROSION & SEDIMENTATION CONTROL PLAN
C8.0 SITE DETAILS
WHITE LAKE TOWNSHIP SANITARY SEWER STANDARD DETAILS
WHITE LAKE TOWNSHIP STORM SEWER STANDARD DETAILS
WHITE LAKE TOWNSHIP WATER MAIN STANDARD DETAILS
OAKLAND COUNTY SOIL EROSION AND SEDIMENTATION CONTROL DETAILS
L-1 LANDSCAPE PLAN
IRRIGATION PLAN
A0.5 SITE PLAN
A0.6 DIMENSIONAL SITE PLAN
A0.7 PHOTOMETRIC SITE PLAN
G2.0 TRASH ENCLOSURE DETAILS
A1.0 FLOOR PLAN
A2.0 EQUIPMENT AND SEATING PLAN
A4.0 EXTERIOR ELEVATIONS (in color)
A4.1 EXTERIOR ELEVATIONS (in color)
A4.2 SITE AND BUILDING SECTIONS
A5.2 WALL SECTIONS
A5.3 WALL SECTIONS

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Developer's
Initials

_____
Township's
Initials

The Developer shall be required to repair/replace any broken sections of concrete within the frontage sidewalks adjacent to the site along Bogie Lake Road and Highland Road, as determined by the Township Engineering Consultant.

_____
Developer's
Initials

_____
Township's
Initials

EXHIBIT D
(DEVELOPMENT SCHEDULE)

The development schedule will be as follows:

Upon all reviews and approvals obtained, including the required permits, construction will begin. The construction duration from ground break to opening is anticipated to be ninety (90) days.

_____
Developer's
Initials

_____
Township's
Initials

EXHIBIT E
(APPROVED FINAL PBD DEVIATIONS AND WAIVERS)

1. Landscaping Requirement – Section 5.19 D Required Screening and/or Landscaping: Zoning of Adjacent Parcel
   Applicable requirement: North: 10-foot greenbelt, 5 deciduous/evergreen trees and 39 shrubs
   Proposed: North 7'10" greenbelt, 5 trees, 39 shrubs
   Due to site restraints, we are requesting a waiver from the 10' greenbelt to a 7'-10" greenbelt.

2. Landscaping Requirement – Section 5.19 D Required Screening and/or Landscaping: Zoning of Adjacent Parcel
   Applicable requirement: East: Land Form Buffer (A-2), or Buffer Strip (B) & Obscuring Fence (D), or Screen Wall (C)
   Proposed: East: Applicant has not provided landscaping/screening that satisfies either of the requirements.
   Greenbelt "E" is proposed. We are requesting a waiver from the screening requirements.

3. Landscaping Requirement – Section 5.19 D Required Screening and/or Landscaping: Zoning of Adjacent Parcel
   Applicable requirement – West: 20-foot greenbelt, 10 deciduous/evergreen trees and 80 shrubs.
   Proposed: West: 9'5" greenbelt, 10 trees, 80 shrubs
   Due to site restraints, we are requesting a waiver from the 20' greenbelt to a 9'-5" greenbelt.

4. Signs: Section 5.9 of the Zoning Ordinance regulates signs. The applicant is proposing a 27.7 square feet wall sign on both the south and west elevation. The ordinance allows the secondary sign to be half the size of the primary sign. We are requesting a 5% waiver so both the south and west wall signs could be 10% of the south building elevation.

5. Architectural Character Requirements – Section 6.8.E.iv: Due to the interior layout of the kitchen equipment etc., the 30% window requirement is unable to be met at the west building elevation. We are requesting a waiver from that requirement accordingly.

6. The Ordinance requires a 60 feet setback from the west property line. We are requesting a waiver of this requirement from 60 feet setback to 34'-3" setback.

7. The Ordinance prohibits placement of the dumpster in the required front yard/street-side setback. We are requesting a waiver of this requirement.

8. The Ordinance requires that trees shall not be planted closer than four feet from the property line. Developer has stated that because of limited space between the property line and the curb, trees cannot be placed more than four feet from the property line. We are requesting waiver of that requirement.

_____
Developer's
Initials

_____
Township's
Initials

9. Seven trees are required to be placed in the parking lot. Only three trees are provided in the parking lot as shown on the landscape plan. We are requesting waiver of the requirement for seven trees in the parking lot.

PBD Agreement 051822

_____
Developer's
Initials

_____
Township's
Initials

OAKLAND COUNTY TREASURERS CERTIFICATE
This is to certify that there are no delinquent property taxes as of this date owed to our office on this property. No representation is made as to the status of any taxes, tax liens or titles owed to any other entities.

MB FEB 24 2022

ROBERT WITTENBERG, County Treasurer
5.00 Sec. 135, Act 206, 1893 as amended

334116 Liber 57527 Page 499 UCC #
2/28/2022 11:25:59 AM Receipt #000265158
$26.00Misc Recording
$4.00 Remonumentation
$5.00 Automation
$0.0 Transfer Tax
PAID RECORDED – Oakland County, MI
Lisa Brown, Clerk/Register of Deeds

COVENANT DEED

MEIJER, INC., a Michigan corporation, whose address is 2929 Walker Avenue, N.W., Grand Rapids, Michigan 49544 ("Grantor"), for good and valuable consideration (Real Estate Transfer Tax Affidavit filed),

CONVEYS unto **GREAT LAKES TACO LLC**, a Michigan limited liability company, whose address is 8487 Retreat Drive, Grand Blanc, Michigan 48439 ("Grantee"), the following real property situated in the Township of White Lake, Oakland County, Michigan, described as:

SEE ATTACHED EXHIBIT A (the "Property").

SUBJECT TO: (a) Terms, covenants, conditions and restrictions as specified in the Declaration of Restrictions executed by Grantor and Grantee, which Declaration is dated the same date as this Covenant Deed and recorded simultaneously with this Covenant Deed; (b) easements and restrictions of record; (c) a perpetual easement herein reserved by Grantor for the benefit of Grantor's adjacent property for the use, operation, maintenance, inspection, replacement, and repair of all existing utility lines, drainage, and improvements currently located on, onto and/or under the surface of the Property or within ten (10) feet of the boundary of the Property (together, the "Improvements"). Grantee acknowledges that no improvements shall be constructed over such Improvements without the prior written consent of Grantor, provided, however, Grantee may use the easement areas for landscaping, driveways, parking lots, curbing and curb cuts that do not interfere with Grantor's retained easement. Grantee shall have the right to change the location of the Improvements on the Property, provided such relocations do not result in the interruption or diminishment of utility service or drainage and further provided Grantee obtains Grantor's prior written consent for any such relocation, which consent shall not be unreasonably withheld, conditioned or delayed, and Grantee shall assume any and all obligations to restore the easement areas (and the Grantee improvements therein) following the disturbance of the Property resulting from Grantor's use, operation, maintenance, inspection, replacement and repair of the Existing Improvements; (d) any existing drainage from adjacent parcels and roadways currently draining onto and/or across the Property; (e) all zoning and land use ordinances; and (f) any general real property taxes and assessments not yet due and payable, with covenant to defend title to the Property against all persons and demands claiming by, through or under the Grantor and no other persons and claims/demands whatsoever.

3P
Ret
env

The Grantor grants to Grantee the right to make zero (0) divisions under Section 108 of the Land Division Act, Act No. 288 of the Public Acts of 1967, as amended.

2022 FEB 18 PM 12:45

RECEIVED
OAKLAND COUNTY
REGISTER OF DEEDS

REVENUE TO BE AFFIXED
AFTER RECORDING

OK LB

2

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 as of this 17 day of February, 2022.

MEIJER, INC.
a Michigan corporation

By: _____
Michael Flickinger
Its: Vice President-Real Estate

Legal AM
Bus. ML
Bus. KA

STATE OF MICHIGAN)
) ss.
COUNTY OF KENT)

The foregoing instrument was acknowledged before me this 15th day of February, 2022, by Michael Flickinger, the Vice President-Real Estate of Meijer, Inc., a Michigan corporation, for and on behalf of said corporation.

_____
Notary Public
State of Michigan, County of Ottawa
My Commission expires: 2-17-23
Acting in the County of: Kent

LARAE B STEIGENGA
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF OTTAWA
My Commission Expires February 17, 2023
Acting in Kent County, MI

WHEN RECORDED RETURN TO:	SEND TAX BILLS TO:	DRAFTED BY:
Great Lakes Taco LLC Attn: Louis C. Dortch, Jr. 8487 Retreat Drive Grand Blanc, MI 48439	Great Lakes Taco LLC Attn: Louis C. Dortch, Jr. 8487 Retreat Drive Grand Blanc, MI 48439	Aaron Morrissey, Esq. Meijer, Inc. 2929 Walker Ave., N.W. Grand Rapids, MI 49544
Tax Parcel No. Y-12-20-276-036		

EXHIBIT A
TO
COVENANT DEED

LAND SITUATED IN THE COUNTY OF OAKLAND, TOWNSHIP OF WHITE LAKE, STATE OF MICHIGAN, IS DESCRIBED AS FOLLOWS:

A PART OF THE NORTHEAST ¼ OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS COMMENCING AT THE CENTER OF SECTION; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST ALONG THE NORTH-SOUTH ¼ LINE OF SAID SECTION 20, 198.92 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET; THENCE SOUTH 87 DEGREES 30 MINUTES 16 SECONDS EAST, 513.36 FEET; THENCE 28.28 FEET ON A CURVE TO THE RIGHT WITH A RADIUS OF 5821.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 84 DEGREES 52 MINUTES 11 SECONDS EAST, 28.28 FEET; THENCE SOUTH 84 DEGREES 42 MINUTES 00 SECONDS EAST, 435.29 FEET; THENCE 118.86 FEET ON A CURVE TO THE LEFT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF SOUTH 85 DEGREES 18 MINUTES 14 SECONDS EAST, 118.86 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00 DEGREES 01 MINUTE 09 SECONDS WEST, 236.61 FEET; THENCE 94.59 FEET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 533.50 FEET, CHORD BEARING AND DISTANCE OF NORTH 05 DEGREES 00 MINUTES 27 SECONDS WEST, 94.46 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 32 SECONDS EAST, 147.67 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 28 SECONDS WEST, 338.00 FEET; THENCE 137.67 FEET ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 5637.58 FEET, CHORD BEARING AND DISTANCE OF NORTH 86 DEGREES 36 MINUTES 27 SECONDS WEST, 137.67 FEET TO THE POINT OF BEGINNING.

Tax Parcel Number Y-12-20-276-036 (formerly part of 12-20-276-033)

RESOLUTION ADOPTED BY MEMBERS OF GREAT LAKES TACO, LLC,
a Michigan limited liability company

The following are resolutions of GREAT LAKES TACO, LLC, a Michigan limited liability company ("Company") unanimously adopted and binding on the Company pursuant to its operating agreement, and effective on May 17, 2022.

The undersigned, constituting all members of Company, have approved the following:

Resolution Authorizing Execution of any documents in connection with the construction of a Taco Bell Restaurant in White Lake Township

Recitals

1. There has been presented to the members of Company various documents in connection with the construction of a Taco Bell Restaurant in White Lake Township

2. The members of Company find it to be in the best interest of the Company to execute these documents.

Therefore, the Company resolves as follows:

The Company is authorized to enter any necessary documents in connection with the construction of a Taco Bell Restaurant in White Lake Township

Louis C. Dortch Jr., the agent for the Company, is authorized and empowered, for and on behalf of the Company, to execute, acknowledge, and deliver any necessary documents in connection with the construction of a Taco Bell Restaurant in White Lake Township

Louis C. Dortch Jr., the agent for the Company is authorized and empowered for and on behalf of the Company to do any and all acts and things and execute any and all additional instruments, papers, or documents that may be or become necessary, desirable, or appropriate to carry out, put into effect, and make operative any portion or portions of these resolutions.

ATTEST:

Louis C. Dortch Jr.