

**GENOA CHARTER TOWNSHIP  
PLANNING COMMISSION  
PUBLIC HEARING  
JULY 13, 2015  
6:30 P.M.  
AGENDA**

CALL TO ORDER:

PLEDGE OF ALLEGIANCE:

APPROVAL OF AGENDA:

CALL TO THE PUBLIC:

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

**OPEN PUBLIC HEARING #1**... Review of a special use, sketch plan, and environmental impact assessment for a proposed K-12 Livingston Christian School to be located within the Brighton Church of the Nazarene, located at 7669 Brighton Rd., Brighton, Michigan, parcel # 4711-25-400-058. The request is petitioned by Brighton Nazarene Church.

**Planning Commission recommendation of petition**

- A. Recommendation of Special Use
- B. Recommendation of Environmental Impact Assessment (06-15-15)
- C. Recommendation of Sketch Plan (05-20-15)

**OPEN PUBLIC HEARING #2**... Review of a sketch plan application for an amendment to the approved building elevations for Brighton Church of the Nazarene, located at 7669 Brighton Rd., Brighton, Michigan, parcel # 4711-25-400-058. The request is petitioned by Brighton Nazarene Church.

**Planning Commission disposition of petition**

- A. Disposition of Amended Site Plan Building Elevations (06-23-15)

**OPEN PUBLIC HEARING #3**... Review of a site plan and environmental impact assessment for a proposed 3,954 sq ft restaurant building, located on a vacant lot south of Grand River Avenue and west of Latson Rd., Howell, Michigan, parcel # 4711-05-400-066. The request is petitioned by Metro Design & Build, Inc.

**Planning Commission disposition of petition**

- A. Recommendation of Environmental Impact Assessment (06-01-15)
- B. Recommendation of Site Plan (06-25-15)

**Administrative Business:**

- *Staff report*
- *Approval of June 8, 2015 Planning Commission meeting minutes*
- *Member discussion*
- *Adjournment*

**GENOA CHARTER TOWNSHIP  
PLANNING COMMISSION  
PUBLIC HEARING  
JUNE 8, 2015  
6:30 P.M.  
MINUTES**

CALL TO ORDER: The meeting of the Genoa Township Planning Commission was called to order at 6:31 p.m. Present were Barbara Figurski, James Mortensen, John McManus, Diana Lowe, Eric Rauch, Chris Grajek, and Chairman Doug Brown. Also present were Kelly VanMarter, Community Development Director/Assistant Township Manager; Gary Markstrom of Tetra Tech; and Michelle Foster of LSL.

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was recited.

APPROVAL OF AGENDA: Upon motion by John McManus and support by Barbara Figurski, the agenda was approved as submitted. **Motion carried unanimously.**

CALL TO THE PUBLIC: A Call to the Public was made with no response.

**OPEN PUBLIC HEARING #1...** Review of a special use, sketch plan, and environmental impact assessment for a proposed K-12 Livingston Christian School to be located within the Brighton Church of the Nazarene, located at 7669 Brighton Road, Brighton, Michigan, parcel # 4711-25-400-058. The request is petitioned by Brighton Nazarene Church.

**Motion** by Diana Lowe to recuse Eric Rauch. Support by Chris Grajek. **Motion carried unanimously.**

Steve Morgan addressed the Planning Commission. He is a member of the church. The petitioner is requesting an amendment to the special use permit to allow for a school. The average class size is estimated to be 15 at greatest. Due to the class sizes, the sports teams will not be large.

Mr. Morgan addressed the landscaping and screening first. A photograph taken from the cul-de-sac on Aljoann Drive facing the church was provided. Approximately three weeks ago, the church members cleared up the dead trees and brush in this area. Another photograph was provided that illustrates what that area would look like in two years with the newly planted trees.

The pastor met with the property owners of adjacent lots to discuss their concerns. He feels that they are all now on good terms and willing to work with each other. He reported that they are all in agreement with the new plans for landscaping and screening. The proposed fence is over 700 feet long and is on the church property by 10 or 15 feet for the majority of that length.

A portion of the church lot would be dedicated as a park for the occupants of Aljoann.

The property line between the new facility and the church next door will be planted with arborvitae.

A call to the public was made regarding the landscaping. Jay Johnson addressed the Planning Commission. He is a neighbor from Aljoann. He suggested that the park is not really a park, but rather a landscape buffer. The church will maintain the property, but they will grant an easement to the property owners from Aljoann. He indicated that he supports the current plan. The church would take care of any dying trees, etc. Chairman Brown suggested they place their agreement in writing.

Mike Barrett, president of the homeowners association addressed the Planning Commission. He feels the meeting with the church was very productive. He suggested the church place a gate in the fence for maintenance purposes.

Michelle Foster indicated that the landscaping plans from 2013 had not been fulfilled, but it appears the petitioner is working toward that goal.

Steve Morgan next addressed the traffic study. Chairman Brown indicated that a traffic study for 250/35 was requested and he feels that it has not yet been provided. Mr. Morgan indicated the forecast date was reduced to 2018 and reduced the student population. Chairman Brown indicated that the study for 250/35 was requested for the purpose of planning ahead. He is requesting that a condition be placed on the facility use that once it hits 200, a new traffic study should be done at that point to determine where the traffic should flow at that time. The church believes that the traffic on Brighton Road has been reduced due to the new Latson Road interchange. Mr. Morgan indicated Boss Engineering is already retained to review traffic flow every October.

Cathy Morehouse of 5700 Site Court in Brighton, Michigan runs a private school and suggests that a layered drop-off/pick-up time based on last name might be a good option for the school. She has found that it works well in similar situations.

Chairman Brown asked if it would be possible for the school to report attendance on the Monday following the third Friday in September each year. Ms. VanMarter indicated that can certainly be required.

Mr. Morgan went on to review the traffic study statistics and periods with the Planning Commission.

Michelle Foster informs the Planning Commission that pedestrian circulation is also a concern on this site.

The call to the public was made with the following response:

Don Yaquinto lives in Pine Creek and is concerned with the increased traffic on Brighton Road and possible cut-through traffic in his subdivision. If people are unable to turn left out of the church/school property they will turn around at the Pine Creek entrance and cause congestion in the left turn lane.

Colleen Bussey lives on Aljoann and has a child who attends the high school. She cannot believe that this request has gotten this far because the traffic in this area is so bad. She stated that drivers don't follow the rules now and this will only make it worse.

Virginia Wennerberg of 7230 Pine Vista addressed the Planning Commission. She asked about what plan "b" would be for a larger capacity. Mr. Markstrom explained the options. She asked if the Planning Commission feels there is a maximum number that the petitioner could never exceed. Chairman Brown indicated that given the size of the building, he believes the maximum student body is 250 with a staff of 35. But unfortunately, he cannot give a clear answer at this time.

Carol Hawley of Pine Creek Ridge asked if staff was counted, as well as teachers, such as nurses, secretaries, etc. The petitioner indicated the number 26 includes staff and teachers. She asked about custodians and lunch staff. They are estimating the staff based on current numbers. She asked if it exceeds that number, would the school close down. Chairman Brown discussed doing annual reviews of staff and student counts.

Andy Koch addressed the Planning Commission. He runs the driving certification located at the church. He believes the impact on traffic is minimal. His hours are 9 to 5 with the certification class. He adjusts class schedule so as not to interrupt weddings, funerals, etc. In an average month, he tests 25 tractor trailers, most of which have their reverse alerts turned off.

Andrea Spanstra inquired whether weekend testing was performed. Mr. Koch indicated Saturdays from 8 to noon and that is usually personal vehicles. She commended Mr. Koch on being respectful to the neighborhood.

Conchi Freund is a resident of Pine Creek Ridge and has been for 18 years. She appreciates the fact that the impact on the community is being studied. She supports the Livingston Christian School. She wants to focus on the positive of what the school will bring to the community.

The call to the public was closed.

#### **Planning Commission recommendation of petition**

- A. Recommendation of Special Use
- B. Recommendation of Environmental Impact Assessment (03-16-15)
- C. Recommendation of Sketch Plan (05-14-14)

Motion by Mr. Mortensen to table this matter to July 13, 2015. Support by Chris Grajek.  
**Motion carried unanimously.**

Kelly VanMarter will discuss Mr. Koch's illegal non-conforming use with the Township Attorney to determine how to proceed. Michelle Foster indicated that an opinion by the Township Attorney should be obtained. She then reviewed her list of outstanding issues as requested by the petitioner. The park will not be deeded or an easement provided to the neighbors. It will remain church property and be maintained by the church.



3121 E. Grand River Howell, MI 48843  
517.546.4836 fax 517.548.1670  
www.bosseng.com

June 25, 2015

Ms. Kelly VanMarter, AICP, Community Development Director  
Genoa Charter Township  
2911 Dorr Road  
Brighton, MI 48116

Re: Brighton Nazarene Church/Livingston Christian Schools Traffic Control Plan

Dear Ms. VanMarter,

We have made changes to the Traffic Control Plan and Traffic Impact Study for Brighton Nazarene Church/Livingston Christian Schools based on input and the memorandum received from the traffic sub-consultant hired by the Church and Livingston Christian School. The changes are noted below.

#### Traffic Control Plan

1. The traffic control plan has been modified to show improved flow in the drop off and pick-up zone. With the use of strategically located parked staff vehicles and cones in the drive aisles and particular parking spaces the loading and unloading zone is more clearly established and maintained. Cars will not be able to enter the zone other than at its intended location.
2. Staff will be utilized in the parking lot to coordinate the pedestrian movement across the loading and unloading zone for improved pedestrian safety as well as improved traffic flow.
3. In addition to the traffic control director designated for the pedestrian crosswalk there is an additional traffic director that will monitor the traffic flow into and out of the site, specifically the queuing for left turns.

#### Traffic Impact Study

1. The body of the report was modified to incorporate information included in the Fleis and Vandenbrink Engineering, Inc. memorandum. The student count in the study is now indicated as 250.
2. Appendix C, Fleis and Vandenbrink Engineering, Inc. memorandum addressing the student dropoff and pick up is included.
3. Appendix D, Roles and Responsibilities of the Traffic Directors is now included.
4. Appendix E, Parent/Student Orientation-Traffic Control and Pedestrian Safety Guideline is now included.

Feel free to contact us should you have any questions, or if you are in need of any additional information.

Sincerely,  
BOSS ENGINEERING COMPANY

A handwritten signature in black ink, appearing to read "Brent W. LaVanway".

Brent W. LaVanway, P.E.  
Director of Engineering

Charles (Robert) Hensley  
4793 Aljoann  
Brighton, MI 48116

July 7, 2015

Genoa Township Planning Commission  
2911 Dorr Rd  
Brighton, MI 48116

**Regarding:** The Church of the Nazarene, Application for Zoning Variance/Special Use Permit for Pre-K Through Grade 12 School

**Attention:** Kelly VanMarter – Please include this letter in the information package submitted to the Genoa Township Planning Commission for its consideration during the scheduled meeting on July 13, at which time it is scheduled to discuss and decision the above referenced request.

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Ladies and Gentlemen,

I am a resident of Genoa Township and a homeowner at Worden Lake Woods. I am writing this letter to express my concerns, frustration and disappointment with the Genoa Township Planning Commission and the Church of the Nazarene (Church,) resulting from its application for a zoning variance/special use permit to lease space to a faith-based school where a pre-school through grade 12 private school will be established. Construction of the space in question (a major expansion of the existing facilities) was originally approved by this Commission and the Genoa Township Board of Trustees for use as church classrooms and meeting space, not for use as a school.

Please note that I write this letter as a concerned resident of the Genoa Township and my viewpoints are mine alone and do not represent those of the Worden Lake Woods Homeowner's Association nor its residents. My comments are based on discussions with Church members/leaders and discussion of this topic at the three previous Planning Commission meetings.

***Premature Assumptions***

The Church and school have been advertising in multiple forms of media for applications for new students at the Church's location since 2014. I became aware of this before the application for the zoning variance/special use permit from the Church was first discussed at the April, 2015 Planning Commission meeting. Following is the headline and key information from an article in the Livingston Daily announcing the school's new location. (Please note that the referenced article was written prior to the April, 2015 Planning Commission meeting, at which time the Church's application for the zoning variance/special use permit was first discussed.)

## **Livingston Christian Schools moves to Brighton location**

Abby Welsh 8:21 p.m. EST March 6, 2015

Livingston Christian Schools will be officially moved into Brighton Nazarene Church this fall. The school, preschool through 12th grade, **announced its big move to its new location last fall**, with 93 percent of its students returning. The new location is at 7669 Brighton Road in Genoa Township.

There are numerous additional announcements on the school's website announcing plans to move to the Church's campus. Knowing that the Church had not received the appropriate approvals to lease the space to the school, I could only assume that this commitment by the Church is a result of a promise to the school by the Church based on an assumption that the zoning variance/special use permit would receive approval via "rubber stamping" or by utilizing "delaying tactics." My assumptions will be discussed/addressed later in the letter.

It might appear from the referenced news article that the Planning Commission's and Board of Trustee's decision in this matter has already been determined. I hope that assumption is incorrect, as I believe that the assumptions in the article are inaccurate because approval of the zoning variance/special use permit enabling the Church to lease space to the school has yet to be approved! Therefore, I am raising my questions, concerns, frustration, and disappointment regarding the Church's application, particularly the timing, and actions to date by the Planning Commission, along with its due diligence process.

### ***My Point of View on Faith-Based Education***

I'll start by stating that I have no objection to a faith-based education. While I attended public elementary and high school, I completed my undergraduate work at a private, Baptist affiliated college. Therefore, I am not opposed to a church affiliated education; however, I also do not consider it necessary to ensure that the parents' and/or students' desired religious values are developed and fostered for the student; this occurs at home and through church related activities. Faith based education is a choice, not a requirement.

Therefore, the Planning Commission should not consider approval of the Church's application a necessity to fulfill a need or educational gap nor should the Church and/or the school consider the approval a "given," which, based on previous announcements and communications, they do!

### ***Economic Impact***

My first concern and point of issue is the impact that the school will have on the economy of Genoa Township. My concerns/questions, both positive and negative, follow:

Positives: There will be added revenue for DTE for added electrical use and for the Town of Brighton for additional water use. There may be additional revenue for local food vendors for lunches and activities. Some local merchants may also benefit from the sales from parents driving their children to/from school, (e.g., gas, snacks, etc.)

Negatives: Since the school and church are 501(c)(3) organizations and exempt from taxes, I'm not aware of any positive impact to the tax revenues of Genoa Township. There will be added traffic, up to 300 cars (250 students plus staff at maximum capacity based on the application,) that will be using the streets to and from the school, up to two times daily for 180 days per year, adding a

burden on what most residents already consider horrible street and road conditions. None of the parents, students or staff who are driving to and from the school, who are not residents of Genoa Township, will share in the cost of maintaining these streets.

### ***Traffic Management***

There has been a great deal of discussion around this topic at the three previous Planning Commission meetings at which the Church's application for the zoning variance/special use permit was discussed. This includes disruption to the surrounding neighborhoods, including residents of Worden Lake Woods, specifically noise from students, staff and cars during the school day, extracurricular activities at night and on weekends, and traffic management on public and private streets during school starting and ending times.

The Planning Commission has asked the Church leadership for documentation to support the ability of the public streets and the Church's parking to accommodate the flow of traffic, but to my knowledge this has yet to be (satisfactorily) provided. I believe that there has been a traffic flow proposal for the church's parking lot during times of drop-off and pick-up but I haven't seen anything that addresses the overflow of traffic while cars are waiting to enter the Church parking. There is no parking available on Brighton Rd. or any adjoining street, so where will these cars go until they have access to the church lot? Additionally, the parking lot traffic flow proposal is based on 200 students and 26 staff, yet the proposed zoning variance/special use permit allows for 250 students at the school. As of the June, 2015 Planning Commission meeting, the Church had not developed and provided a sustainable solution.

### ***Impact on Adjoining Residential Neighborhoods***

The area surrounding the Church is primarily residential, not commercial. At this time the Church's activities, which may cause disruption to adjoining neighborhood's livelihood and ability to enjoy our homes, is limited primarily to Sunday mornings and Monday evenings. If the school is approved, this is extended to at least eight hours per day, five days per week, 40+ weeks per year. As a result, this will most likely result in homes in adjoining neighborhoods to be devalued or deemed undesirable.

I ask you, members of the Planning Commission, would you approve this application if you lived immediately beside the Church/proposed school or even in the general vicinity, when the increasing traffic problems are included in the equation?

### ***Timeline of Application***

With all due respect to the Church's leadership, it should have started this application process at least a year ago, at the time or after they and the school decided to relocate the school to the Church, which was announced in fall, 2014, not 4-5 months before the school is scheduled to open. The school and Church have been actively soliciting applications for new students at this location since fall, 2014, well before the Church had ever applied to the Planning Commission for the zoning variance/special use permit. Residents of Worden Lake Woods were told by an official representative of the Church that they verbally committed to lease the space to the school "some time ago" (sometime in 2014) and when asked why approval for the zoning variance/special use permit was not pursued at that time, an answer was not provided. We were also told that, following the verbal commitment by the Church to relocate the school to the Church, that several parents had started attending the Church and had made



“significant” contributions toward construction of the new building that would house the school and that if the zoning variance/special use permit wasn’t approved, that the Church may have to return the cash contributions or gifts-in-kind, resulting in significant hardship for the Church. One representative stated that ‘this might result in bankruptcy for the Church,’ but that was later retracted by another.

It is obvious, at least in my mind, that the Church should not have made any commitments to the school prior to the Church obtaining the appropriate approvals from the Planning Commission and Board of Trustees. It would appear that the Church assumed that there would be no opposition and that the application would be “rubber stamped” or that by delaying submission of the application for a zoning variance/special use permit until a few months prior to the schools scheduled opening, that they would receive enough postponements to ensure that they would receive at least a temporary approval, since the students, which have now grown from 147 at the current location to more than 200 for the 2014-2015 school year, would have nowhere else to go. Well, yes they do! They can either attend another faith based school, a public school or they can be home-schooled.

I recognize that concessions to established procedures are sometime necessary for inexperience applicants when applying for zoning variances/special use permits; however, the Church has experience with this process and know what the time constraints and expectations are. Exceptions should NOT be made just because the applicant is a religious organization that is leasing space to an educational entity, and that’s what appears to be happening...perception is reality!

### **Conclusions and Recommendations**

I spent my entire career in Lending with financial institutions and chaired numerous Credit Committees. The lenders were expected to come to Committee prepared to discuss the credit and defend their recommendation with substantiated analysis. If they didn’t, the credit was either not approved or unauthorized. The Committee majority determined the outcome. While I may not have always agreed with the majority’s decision, I supported the Committee’s decision, as did the other members of the Committee; therefore, the process worked!

The Planning Commission has tabled this application for three months which, in my mind, results from one of two things:

- The Church has delayed providing the requested information knowing that it would result in additional postponements until it was too late not to allow the school to open because the 200+ students wouldn’t have a place to attend school. (But, as previously stated they do - public school, another private school or home school!)
- This Planning Commission has deliberately not rendered a timely decision based on the information provided by the Church, leading to the same result.

Whichever it is, the actions that I have witnessed over the previous three months support the assumption that the process is not accomplishing the results intended. As officials of Genoa Township, the Planning Commission has a responsibility to the Board of Trustees and the township’s citizens to make informed decisions, based on factual information provided and utilizing the guidelines within which you are bound to operate, not for what is in the best interest of The Church of the Nazarene, the school or Worden Lake Woods, but for the entire township! In my mind, I have not seen a sustainable solution to ensure little, or at the very least, manageable impact, to the surrounding affected residential

neighborhoods; therefore, the request is not in the best interest of the township. It adds little or no support to our economy, it creates added traffic that will be unmanageable, and does not support the residents of the township.

If the Church has not provided all information previously requested by the Planning Commission, which includes a sustainable solution to the traffic issues that has been requested at least three times, by the next meeting on July 13, 2015 and it does not meet the standards for a safe environment for the students and the residents of Genoa Township, I respectfully encourage this Commission to decline their request for the zoning variance/special use permit, not “kick the can down the road” again by tabling the decision for another month or approve a 1 – 3 year “trial” permit to operate the school and then revisit (which is nothing more than a glorified way of kicking the can down the road!) The Planning Commission and Board of Trustees do not have the ability to “police” commitments by the applicant that are part of the Planning Commission’s or Board of Trustee’s decision, which is evidenced by previous commitments by the Church that were not fulfilled on a timely basis. Therefore, a “trial” approval without a means of policing commitments to which the applicant is to be held, is not a viable solution.

As a Genoa resident who is disappointed, not only as a result of the Church’s approach/delay in submitting this application for a zoning variance/special use permit, but also the Planning Commission’s delay in making a decision, once again I respectfully ask you to make an informed decision based on the facts and information presented by the July 13 meeting. I understand your desire to be accommodating but I encourage you to maintain the integrity of the process and consider how your decision impacts all Genoa Township residents and our community. This will help ensure the integrity of the process and maintain the community’s trust in the decisions rendered by the Planning Commission and Board of Trustees.

Sincerely,

Charles Robert Hensley

## Kathryn Poppy

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**From:** Harry Eiss <harryeiss@comcast.net>  
**Sent:** Saturday, June 13, 2015 10:05 AM  
**To:** Kelly VanMarter  
**Subject:** Planning Commission - Brighton Nazarene Church

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hi Kelly: I will appreciate it if you will pass this along to the Planning Commission. Thanks, Harry

Dear Commission:

Apparently, the Brighton Nazarene Church is now making claims I have had some inexplicable reversal and am now friends with them, delighted they are adding a school, and even willing to keep up their park for them. I believe you are intelligent enough to realize that something doesn't sound right about this. In fact, it's absolutely absurd.

It is what they do, lie. I have been lied to, lied about and threatened by them. They seem to think they're going to get their way no matter what, and it appears they are.

But at the very least I am going to try and prevent them from misrepresenting me. Please do not believe anything they say to you about me. If you're interested in knowing my thoughts, I'm easy to contact.

Have a good day,  
Harry

I would like to refer to past approved minutes in order to make a few points about why I believe the current special use permit should be denied. My comments with regard to the past approved minutes are in red to reduce the amount I would like you to review.

### Approved minutes from 9-9-13

**Motion** by James Mortensen to recommend to the Township Board approval of the special use permit, subject to:

1. The same conditions of the special use permit granted June 2, 2003 shall be complied with and expanded to include maintenance of all of the additional trees and bushes, as well; **There are numerous missing trees from the group that died after they were planted many years ago. Photos 1-3 show where dead trees had been removed and as of yet not replaced. There are in fact 4 missing trees. These trees are needed to ensure a solid buffer to the public road. A follow on requirement for barrier maintenance is required.** The church was directed to replace and maintain the dead trees as par of the special use permit issued in 2003.



COMMISSIONERS: YOU RECEIVED THIS BY EMAIL SHORTLY BEFORE THE JUNE 8 MEETING. MR. JOHNSTON HAS REQUESTED THAT IT BE INCLUDED AGAIN BECAUSE HE BELIEVES THE CONTENT IS STILL RELEVANT TO THE CASE.

Photo1



Photo 2



Photo 3

2. The petitioner, with respect to the original conditions, shall provide a security guard to patrol the parking lot on the days the skate park is open between the hours of 9 p.m. and 12 a.m. The church employee living on the site will be permitted to perform the security guard duties provided he is appropriately licensed;
3. Procedures will be in place, available for Township inspection, regarding the maintenance of the underground detention system;
4. Trash pick up will not be permitted until after 8a.m.;
5. The approval of the site plan and environmental impact assessment: This recommendation is made because this commission has found that the general land use standards of ordinance 19.03 and article 3 are met.

Support by Diana Lowe. **Motion carried unanimously.**

09-09-13 Approved Minutes

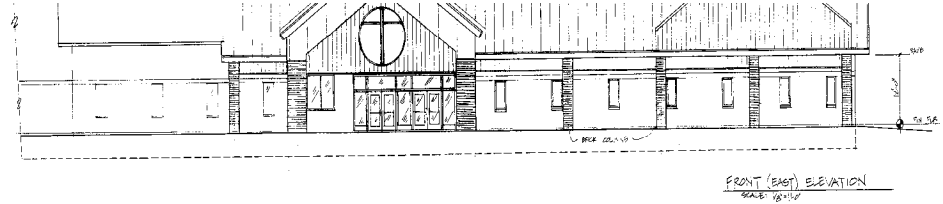
**Motion** by Barbara Figurski to recommend to the Township Board approval of the environmental impact assessment, subject to:

1. The parsonage should be listed as to the north, rather than the south in section C.

Support by John McManus. **Motion carried unanimously.** **Motion** by James Mortensen to recommend to the Township Board approval of the site plan dated 7/30/13, subject to:

1. A note will be added to the site plan briefly describing how the underground detention system will be maintained;
2. The requirements of the Township Engineer addressed in his 8/18/13 letter will be complied with, as well as the requirements of the Brighton Fire Department addressed in their letter of 8/6/13;
3. The building elevations are acceptable; **The elevation that has been built does not match the plan presented, see photo 4. There has been a modification to the elevation that drastically changes the aesthetics of the building dramatically changing the visual impact of the site. Note the size of the cross relative to the approved site plan.**

4. The materials will match the existing building; **The**
5. **siding at the entrance is a deep blue with a full length gold cross, see photo 4 which does not fit within the guidance of matching. There needs to be a decision about what the Naz must do in order to get this elevation to match the approved drawings. The blue material used creates a very contrasting look and does not blend with the existing structure or the surrounding neighborhood.**



**site plan as of 9-9-13**



Photo 4 non matching building materials and change to site plan façade.

6. Parking at 134% is approved;
7. Lighting will comply with the ordinance in terms of foot candles at the property line;
8. Language will be added to the site plan regarding the landscape plan as it relates to how the landscaping will be maintained to avoid future failures that have occurred in the past. **See photo 5 and 6 (before clearing and after clearing). The clearing process of the existing trees and brush has been overly aggressive and has created an eyesore for the community. There was a large number of live trees removed from the buffer. Some of the remaining live trees appear damaged and may not survive the clearing process. A follow on maintenance requirement should be established here also.** Support by Eric Rauch. **Motion carried unanimously.**



Photo 5 before clearing, street view of site.



Photo 6 after planting, street view of site

1. Kelly VanMarter reviewed the ordinance to determine if the driver license testing is a special use under the ordinance. AK Services has been providing this service at the church for 18 years. Mr. Tengel thinks that this business should not be in a church parking lot, which is a residential area. Ms. VanMarter indicated, and Mr. Borden concurred, that this use was never lawful under the ordinance and therefore is an illegal use. In order for it to be a legal non-conforming use, it would have had to have been a lawful use when it started at that site. Mr. Mortensen said he believes if it is not an approved use, then it cannot be assumed to be an unapproved use--it's a "limbo" item.

**The testing should be stopped, it is an illegal use of residential area.**

I am also very concerned that the traffic from the school will lead to issues on Main St and Al Joann Rd. In addition to the normal traffic count on Main Street there is a high percentage of new drivers in the area of the high school. Last year there were 821 parking permits issued to Brighton High School students. If the permit is approved and either Al Joann or Main street are impacted it will lead to potential safety concerns for pedestrians as well as vehicular traffic. Al Joann road was built to the minimum acceptable width. If cars park on this road it will no longer allow two-way traffic. The current traffic flow plan does not account for winter conditions when the lot spaces may be reduced due to snow. The drop off and pick up plan is very aggressive and I do not believe it will be able to be executed. The liability of running such a plan with volunteers may put children and volunteers in jeopardy should there be an accident.

There has been discussion between the neighbors and a member of the church (Steve Gronow) on 29 May to discuss some of our concerns and provide feedback to the church.

In summary I would request the Commission consider the following prior to plan approval. 1. Require replacement of the 4 dead trees on the Southern buffer area. 2. Direct a fence or physical barrier to be added to the entire length of the buffer plan. 3. Direct an upkeep and maintenance requirement for the buffer area. 4. Require more living buffer items be added to the Northern end (cleared portion) of the buffer area. 5. Require a traffic study to ensure there will be no impact on traffic on Main St. or as a minimum limit the student count initially until it can be determined that the pickup/dropoff plan will adequately prevent issues on Main St.

Thank you for your time and consideration

Walter (Jay) Johnston  
810-772-1128



LAW OFFICES OF  
**MANCUSO & CAMERON, P.C.**  
ATTORNEYS AND COUNSELORS

FRANK J. MANCUSO, JR.  
DOUGLAS D. CAMERON

VICTORIA L. LESNER  
BRUCE A. MAYRAND, JR., of Counsel

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June 12, 2015

Kelly VanMarter  
Assistant Township Manager/Community Development Director  
Genoa Charter Township  
2911 Dorr Road  
Brighton, MI 48116

Re: Brighton Nazarene Church  
Parcel No. 4711-25-400-058  
Drivers Testing

Dear Ms. VanMarter:

I am advised that the Brighton Nazarene Church is currently being used as a drivers' education testing facility and has been used for this purpose for several years. The Zoning Administrator has determined that this is an illegal non-conforming use under Section 24.07.05 of the Township's Zoning Ordinance. As an illegal non-conforming Use, Section 24.07.05 of the Ordinance requires that the use be discontinued.

The question has been raised: "does the Planning Commission [and the Township Board] have the ability to require the discontinuance of the illegal non-conforming use as part of the Special Use Application process?"<sup>1</sup>

First, nowhere in the Township Ordinance is "drivers' education testing" listed as a "use." Section 11.02.02, entitled "Determination of 'Similar Uses'" provides in part: All applications for a use not specifically addressed in any zoning district shall be submitted to the Planning Commission for review at a public hearing, based on the following standards:

- (a) A finding that the proposed use is not listed as a Permitted or Special Land Use in any zoning district.
- (b) If the use is not addressed in the Zoning Ordinance, the Planning Commission shall select the use listed in the zoning ordinance which most closely resembles the proposed use . . .

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<sup>1</sup> The Brighton Nazarene Church has submitted an Application for Sketch Plan Review for a Christian Day Care School in the facility and the Application is will be considered for approval at the July 13, 2015 meeting.

- (c) Once a similar use is determined, the proposed use shall comply with any conditional use standards that apply to the similar use.

The only use in the Ordinance that comes close to “drivers’ education testing” is “vocational and technical training facilities.” Vocational and technical training facilities are only permitted in the OSD, GCD, RCD and IND zoning districts. The subject property is zoned SR and vocational and technical training facilities are not permitted in the SR zoning district.

Brighton Nazarene’s Sketch Plan Review is being considered as a Special Use under Section 3.03.02.<sup>2</sup> Article 19 entitled “Special Land Uses” provides in part:

19.02.04 **Review.** The request for special land use approval shall be reviewed as follows:

- (a) The special land use request and related documents shall be forwarded to the Planning Commission.
  - (b) The Planning Commission shall review the Special Land Use application, the Impact Assessment, and the Site or Sketch Plan in terms of the requirements of the Special Land Use General Review Standards Section 19.03, any specific conditions required for the use and the site plan review standards of Section 18.08.  
...
  - (d) The Planning Commission shall recommend approval, approval with conditions or denial of the Special Land Use Request, Site/Sketch Plan and Impact Assessment to the Township Board.  
...
  - (e) For any use requiring special land use approval, the site or sketch plan for such use shall require Township Board approval, based upon a recommendation of the Planning Commission.
  - (f) Township Board Action: Following receipt of the Planning Commission's recommendation, the Township Board shall take one of the following actions on the Special Land Use, Site/Sketch Plan and Impact Assessment:  
...
- (4) Conditional Approval: **The Township Board may impose reasonable conditions with the approval of a special land use**, to mitigate impacts associated with the

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<sup>2</sup> The issue of whether the use of the Church property as a K-12 school was addressed in my May 7, 2015 letter to you where I concluded that such use may be permitted as a Special Land Use under Article 19 of the Zoning Ordinance.

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Ms. Kelly Van Marter  
June 12, 2015  
Page 3

MANCUSO & CAMERON, PC

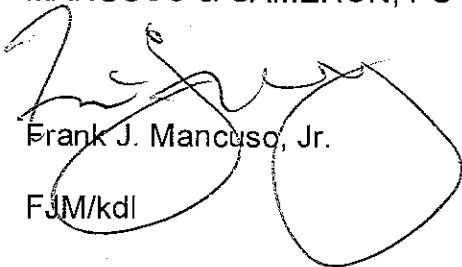
proposed use or activity to ensure that public services and facilities affected by a proposed special land use or activity will be capable of accommodating increased service and facility loads generated by the new development; protect the natural environment; ensure reasonable compatibility with adjacent uses of land and the overall character of the Township, to the extent practical for the use; **ensure the standards of this Article and the Zoning Ordinance are met.** (emphasis added).

Based on the above, It is my opinion that the Planning Commission has the ability to recommend to the Township Board that the illegal non-conforming use of the subject property as a "drivers' education testing" facility be eliminated as a condition to the approval of the Special Land Use Permit. Likewise, under the Ordinance, the Township Board may require as a condition to the approval of a Special Land Use Permit that Brighton Nazarene Church discontinue the use of the subject property as a "drivers' education testing" facility.

If you have any questions, please let me know.

Sincerely,

MANCUSO & CAMERON, PC



Frank J. Mancuso, Jr.  
FJM/kdl



July 8, 2015

Planning Commission  
Genoa Township  
2911 Dorr Road  
Brighton, Michigan 48116

<b>Attention:</b>	Kelly Van Marter, AICP Assistant Township Manager and Planning Director
<b>Subject:</b>	Brighton Nazarene Church – Special Land Use and Sketch Plan Review #4
<b>Location:</b>	7669 Brighton Road – northwest corner of Brighton and Aljoann Roads
<b>Zoning:</b>	SR Suburban Residential

Dear Commissioners:

As requested, we have reviewed the revised submittal requesting inclusion of the Livingston Christian Day School within the existing Brighton Nazarene Church facility at 7669 Brighton Road.

Specifically, the applicant proposes to incorporate a private school with 32 employees and up to 250 students to the existing church building(s). The school would operate from 8AM to 3PM Monday through Friday, although the submittal also notes the potential for other activities outside of these hours.

We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance and provide the following comments for your consideration based on the issues raised at the 6/8/15 Planning Commission meeting.

**A. Summary**

1. The outstanding issues from the 2013 project approval, including landscaping and the drivers training operation, are being addressed by the applicant and staff.
2. Vehicular and pedestrian circulation concerns during school drop-off and pick-up times, as stated in our last review and at the 6/8/15 Planning Commission meeting, remain. The revised submittal includes a traffic management plan attempting to mitigate these concerns.
3. We defer to the Township Engineer for comment on the traffic study.
4. Any additional issues raised by the Township Engineer or Fire Department must be addressed.
5. The church is responsible for coordinating a schedule of activities such that peak usage of both the church and school will not overlap.
6. The elevation changes to the plans approved in 2013 are being addressed and are pending approval through a separate review.
7. New signage is not proposed at this time. Approval and a permit will be required if/when new signage is proposed.



*Aerial view of site and surroundings (looking west)*

## **B. Proposal/Process**

The applicant requests special land use and sketch plan review/approval for the inclusion of a private school within the existing Brighton Nazarene Church facility. The submittal notes that the school will house up to 32 employees and 250 students.

Table 3.03 of the Township Zoning Ordinance lists churches as special land uses in the SR District, with private schools allowed as accessory to a church per Section 3.03.02(1). In accordance with Section 19.06, the proposal is viewed as a major amendment to an existing special land use. Therefore, a new application for special land use approval is required in addition to the need for sketch plan review/approval.

In 2013, the Township granted special land use and site plan approval for an addition to the church facility. Following that approval, the applicant modified the request such that the addition would be handled in two phases. Accordingly, only a portion of what was originally approved has been built.

The outstanding issues of landscaping, buffering between uses, and continuation of the drivers training program have been resolved or are in the process of being resolved.

## **C. Special Land Use Review**

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

- 1. Master Plan.** The Master Plan and Future Land Use Map identify the site and adjacent properties to the east and west as Low Density Residential. This classification is generally intended for single-family development on lots of at least 1-acre in area.

While the land use description in the Plan does not reference institutional uses specifically, there is an overall goal to “accommodate a variety of land uses that are located in a logical pattern and complement community goals, the surrounding land uses, environment, capacity of roads and the sanitary sewer, and public water system capabilities.”

Similar to our findings in the 2013 project review, we believe the proposal is consistent with this goal as a further expansion of an existing institutional use in an area containing a mix of residential and other non-residential uses.

- 2. Compatibility.** The site is located on the north side of Brighton Road in an area already developed with a mix of institutional and single-family residential land uses, including Brighton High School southeast of the subject site. The submittal indicates that the school’s start/end times were chosen so as to not coincide with the hours for the other two nearby schools.

As referenced above, concerns were previously raised by residents in the adjacent neighborhood regarding landscaping and use of the parking lot. Per the applicant, the landscape improvements are well underway and they recently added a 6-foot tall screen fence to proposal, which is along the east side of the parking lot to help improve buffering between uses. As for the drivers training program, we remain of the opinion that it is not permitted and should be discontinued; however, the ultimate determination will be up to the Township.

- 3. Public Facilities and Services.** The physical features of the site are to remain as they currently exist; however, use of the facility will increase by approximately 226 people per weekday (employees and students) with the potential for more in the future.

The revised submittal includes additional details and a traffic study, as was discussed at the previous Planning Commission meeting. We defer to the Township Engineer for a detailed review of this information; however, inclusion of the school still appears to create severe on-site congestion in the form of stacking/traffic back-up during student drop-off (morning) and pick-up (afternoon).

Any other comments/concerns raised by the Township Engineer and/or Brighton Area Fire Department must be addressed under this criterion.

- 4. Impacts.** Aside from an increase in traffic, the most likely impact will be the increased use of the site in general. The applicant has indicated that school use(s) will not coincide with church use(s) and the current submittal includes a more detailed breakdown of activities by day/time.

It is our understanding that the church will be responsible for coordinating and maintaining the proposed schedule of activities. If the request is granted, the church must ensure that the proposed schedule is adhered to.

- 5. Mitigation.** If any additional concerns arise as part of this review, the Township may require efforts necessary to limit or alleviate any potential adverse impacts as a result of the proposal.

#### **D. Use Conditions**

Section 3.03.02(l) provides the following use conditions related to churches:

- 1. Minimum lot area shall be three (3) acres plus an additional fifteen thousand (15,000) square feet for each one hundred (100) persons of seating capacity.**

The submittal notes a capacity of 520 seats in the worship area, which results in the need for approximately 5 acres of lot area. The site provides 15.86 net acres of lot area. This standard is met.

- 2. Buildings of greater than the maximum height allowed in Section 3.04, Dimensional Standards, may be allowed provided front, side and rear yards are increased above the minimum required yards by one foot for each foot of building height that exceeds the maximum height allowed. The maximum height of a steeple shall be sixty (60) feet.**

Since no exterior building modifications are proposed, the submittal does not include elevation drawings. However, based on information contained in our 2013 review letter, this standard is met.

- 3. Wherever an off-street parking area is adjacent to a residential district, there shall be a minimum parking lot setback of fifty (50) feet with a continuous obscuring wall, fence and/or landscaped area at least four (4) feet in height shall be provided. The Township Board may reduce this buffer based on the provision of landscaping, the presence of existing trees or in consideration of topographic conditions.**

The site is adjacent to residential zoning on each side. The entire row of parking along the east side of the site encroaches into the 50-foot setback, although there is existing landscaping between the parking lot and neighborhood.

As referenced throughout this letter, the applicant is implementing the landscape improvements required as part of the 2013 approval. Additionally, a long length of 6-foot tall screen fencing has been added to the plans along the east side of the parking.

- 4. Private schools and child day care centers may be allowed as an accessory use to churches, temples and similar places of worship where the site has access to a paved public roadway.**

The site has access to a paved public roadway. This standard is met.

#### **E. Sketch Plan Review**

- 1. Dimensional Requirements.** As previously noted, the project entails a new use for the existing facility, though no exterior changes are proposed.
- 2. Building Materials and Design.** Similar to the statement above, no exterior building changes are proposed. However, as a side note, the applicant has requested sketch plan approval to modify the previously approved building elevations.
- 3. Parking.** Based on the information provided, as an individual use the church requires a greater amount of parking than the private school. As previously described, peak use of the church and school will not occur at the same time.

New parking calculations have not been provided; however, based on our 2013 review, the site provides more than enough parking for the church use. In fact, the Township granted an increase in the amount of parking provided as part of that project approval.

- 4. Pedestrian and Vehicular Circulation.** No changes are proposed to the existing/previously approved circulation patterns. However, the updated traffic impact study indicates that on-site circulation is projected to be highly congested during school drop-off and pick-up times. The applicant provided a traffic control plan, including traffic directors and a pedestrian crosswalk, based on traffic projections to facilitate smoother circulation and safe student access.

We will defer to the Township Engineer for any technical comments on the updated study, but remain concerned about the projected congestion.

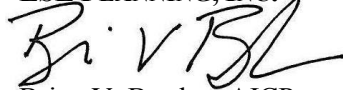
- 5. Landscaping.** The submittal does not propose additional landscaping.

6. **Waste Receptacle and Enclosure.** The waste receptacle and enclosure approved as part of the 2013 project were compliant with current standards. The current submittal does not identify any changes.
7. **Exterior Lighting.** The applicant is not proposing any changes to exterior lighting.
8. **Signs.** The applicant is not proposing any new signage at this time. If proposed, the applicant should submit details for the Commission's consideration. A sign permit is required prior to the installation of any new signage.
9. **Impact Assessment.** In summary, the amended Impact Assessment (6/15/15) notes that the project is not anticipated to adversely impact natural features, public services/utilities, surrounding land uses or traffic. It also indicates that the City of Brighton has been notified of the additional public water supply and that their existing septic system is private and currently being reviewed by the County.
10. **Traffic Study.** The applicant has prepared an updated traffic impact study update (6/23/15) to forecast trip generation for potential growth up to 250 students. We will defer to the Township Engineer for any technical comments on the updated study. As already mentioned, we are concerned about the on-site congestion during peak school times.

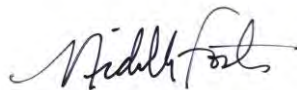
Should you have any questions concerning this matter, please do not hesitate to contact our office. We can be reached by phone at (248) 586-0505, or via e-mail at [borden@lslplanning.com](mailto:borden@lslplanning.com) and [foster@lslplanning.com](mailto:foster@lslplanning.com).

Sincerely,

**LSL PLANNING, INC.**



Brian V. Borden, AICP  
Principal Planner



Michelle Foster  
Project Planner





July 7, 2015

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

**Re: Livingston Christian School  
Special Land Use Permit Application and Sketch Plan Review #4  
Traffic Study and Site Circulation Plan Review #3**

Dear Ms. VanMarter:

The petitioner for the proposed Livingston Christian School was asked to provide a traffic study in accordance with the Township's ordinance. The initial submittal was reviewed by Tetra Tech on April 21, 2015. In late May, the petitioner provided a second response letter and a copy of a revised Traffic Study completed by the petitioner's traffic engineering firm, Boss Engineering. Review comments were provided in our June 3, 2015, letter. The petitioner received additional instructions from the planning commission and has submitted a revised traffic study for review and approval. Tetra Tech has completed a review of this latest study and offers the following comments for Township consideration in approving the site plan:

#### **SUMMARY**

- The revised study and accompanying memo from Fleis & Vandenbrink provides the requested analysis of the onsite traffic flow and level of service analysis for the existing driveway. The memo dated June 23, 2015, from Fleis & Vandenbrink projects 127 pick-ups for the future student enrollment of 250. From this basis and a target average of 5.5 minutes per pick-up, a minimum of at least 325 feet of sidewalk would need to be available for the pick-up zone. The traffic plan indicates an area of 325 feet in front of the building for this zone, however, there is some concern that due to the irregular alignment of the sidewalk along the building that vehicles will disrupt the plan by pulling up close to the building and out of the pick-up line. The petitioner should add additional traffic management provisions for keeping vehicles in the proposed 24-foot-wide space for stacking in order to maintain effective circulation. It is also a concern that the entire zone does not have a continuous sidewalk to accommodate the students. Again, temporary measures will need to be made to separate the students waiting for parent pick up from the parking lot traffic.
- It is imperative that the school provide proper instruction to the traffic management volunteer to keep the flow of traffic on site moving according to the plan presented. At this time, we do not see an impact to Brighton Road as long as parents are directed to either a traffic queue or one of the many on-site parking spots.

**Tetra Tech**

401 South Washington Square, Suite 100, Lansing, MI 48933  
Tel 517.316.3930 Fax 517.484.8140 [www.tetrattech.com](http://www.tetrattech.com)

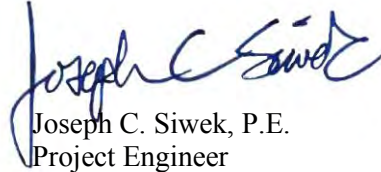
**Mr. Kelly VanMarter**  
**Livingston Christian School**  
**Special Land Use Permit Application and Sketch Plan Review #4**  
**July 7, 2015**  
**Page 2**

It appears the petitioner has performed the analysis and provided the supporting data requested for managing the traffic for the proposed use. Based on the revised documents, we have no further objections to approval of the site plan for approval contingent on the comments above being addressed. If you have any questions regarding this review, please call.

Sincerely,



Gary J. Markstrom, P.E.  
Unit Vice President



Joseph C. Siwek, P.E.  
Project Engineer

Copy: Steve Morgan



# BRIGHTON AREA FIRE AUTHORITY

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

July 2, 2015

Kelly VanMarter  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

RE: Brighton Nazarene Church Expansion  
for Livingston Christian School  
7669 Brighton Rd.  
Site Plan Review

Dear Kelly:

The Brighton Area Fire Department has reviewed the comments regarding the sketch plan for the Nazarene Church use as Livingston Christian School. The original plan was reviewed on June 24, 2013 and again on July 15, 2013. The current plans were received for review on June 29, 2015 and the drawings are dated May 31, 2013 with a letter dated May 20, 2015. The project is based on building a 16,120 S.F. expansion to the existing church building (size of existing building not provided). The new addition is being requested for approval as an educational use. The plan review is based on the requirements of the International Fire Code (IFC) 2012 edition.

Previously, the applicant has attempted to address the fire department's concerns by submitting a letter from a Mr. Steven Morgan identifying that the fire authority concerns are noted and under evaluation by an engineer and that other items were existing and previously approved.

**The following item has yet to be addressed and parking configuration and planning is ongoing without this consideration.**

1. Access to and from the building shall provide emergency vehicles with an outside turning radius of 50' and a minimum vertical clearance of 13½ feet. **(Provide a plan with a truck turning template applied would satisfy the turning radius requirement.)**

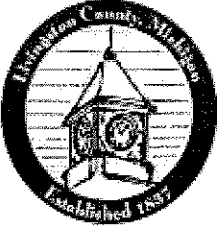
IFC 503.2.4

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

Cordially,

A handwritten signature in black ink, appearing to read "RBF".

Capt. Rick Boisvert  
Fire Inspector



Livingston County Department of Public Health

Environmental Health Division
2300 E. Grand River Ave.
Howell, MI 48843
517.546.9858 \* 517.546.9853 FAX
co.livingston.mi.us/health

PERMIT #: SEP2015-00180
APPLIED: 06/24/2015
ISSUED: 06/26/2015
EXPIRES: 06/26/2016

Sewage Permit

SITE ADDRESS: 7679 BRIGHTON RD BRIGHTON 48116
PARCEL NO.: 11-25-400-058
TOWNSHIP: Genoa Township
SUBDIVISION:
LOT/PARCEL: /
DIRECTIONS: ACROSS FROM BRIGHTON HIGHSCHOOL



OWNER

BRIGHTON CHURCH OF THE NAZAR
7679 BRIGHTON RD
BRIGHTON MI 48116
PH1 810-227-6600

BUILDER

KINGSLAND BUILDING SYSTEMS
1767 ARGENTINE
HOWELL MI 48843
PH1 517-420-8105

CONTRACTOR

BOWMAN EXCAVATING INC
920 W MARR RD
HOWELL MI 48855-8319
PH1 517-546-2117

Environmental Sanitarian: Aaron S. Aumock

Issued Date: June 26, 2015

Project Description:

CHURCH ADDITION

Information:

Type of Use: COMMERCIAL/MIXED USE
Type of Water: Municipal
Type of Work: New
# of Tanks/Capacity: 4 / 11,920
Field Size: 4,800 Sq.Ft.
#Beds/Baths: 0 / 0
Type of Parcel: Metes and Bounds
Bsmt Plumbing:

Disp.Sys: STANDARD FIELD
Pretreatment: None
Type of Flow: Pressure
Effluent Filter: COMMERCIAL
Sys.Elevation: Below Grade
Max.Est.Flow: 2,400

Special Requirements:

- Locate the system in the exact area as per Boss Engineering plans job # 13-100, dated 6/5/15.
100% Cutdown to sand at +/- 2 ft., then backfill with a clean sharp sand as needed, then lay stone and tile, 24" max., 12" min. cover. Adding 1200 sq. ft (zone 4) to existing 3600 sq. ft. system (zones 1 thru 3).
Install a septic tank filter on the outlet end of the septic tank.
\*\*\*Tank installation required. Sanitarian must witness excavation and tank placement. Contact Sanitarian to set up inspection.\*\*\*
Required inspections: 1) cutdown 2) final + pressure test.
The designing Engineer must supervise all phases of the construction work and shall certify in writing upon the completion of the system.

Environmental Sanitarian:

Date Finaled:

Handwritten notes: GENOA 25 7679 BRIGHTON RD SEP2015-00180

AMENDMENT  
TO  
IMPACT ASSESSMENT  
"BRIGHTON NAZARENE CHURCH FACILITY EXPANSION"  
Dated: May 31, 2013  
\*(see Attachment A for copy)

Prepared for:

BRIGHTON NAZARENE CHURCH  
7669 BRIGHTON ROAD  
BRIGHTON, MICHIGAN 48116  
(810) 227-6600

**GENOA TOWNSHIP**

**JUN 23 2015**

 Rec'd

Prepared by:

STEVEN R. MORGAN  
4432 GLEN EAGLES COURT  
BRIGHTON, MI 48116  
(586) 942-9751

March 16, 2015  
(revised June 15, 2015)

## INTRODUCTION

The purpose of this Impact Assessment (IA) report is to show the effect that this proposed development may have on various factors in the general vicinity of the project. The format used for presentation of this report conforms to the Submittal Requirements For Impact Assessment guidelines in accordance with Section 18.07 of the published Zoning Ordinance for Genoa Township, Livingston County, Michigan.

## DISCUSSION ITEMS

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

Prepared By:

Brent W. LaVanway, P.E.,  
BOSS ENGINEERING COMPANY  
3121 E. Grand River  
Howell, Michigan 48843  
517-546-4836

The Amendment was Prepared By:  
Steven R. Morgan, RLS Tenn.  
4432 Glen Eagles Ct.  
Brighton, Michigan 48116  
586-942-9751

Prepared For:

Brighton Nazarene Church  
Owner of Property  
7669 Brighton Road  
Brighton, MI 48116  
(810) 227-6600

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

-No Change from 2013 Impact Assessment-

The site is located on the north side of Brighton Road immediately west of the Worden Lake Woods development and slightly west of the entrance to Brighton High School. The subject property is currently the Brighton Nazarene Church Facility. There is the existing church building, parking lot, detention basin and parsonage. The north end of the property is heavily wooded. There are established tree row buffers on the east and west property lines. The subject property and both adjacent properties are zoned Suburban Residential (SR). The Brighton Nazarene Church also owns the contiguous parcel to the north.

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

-No Change from 2013 Impact Assessment-

The total site area is 16.43 acres. The front (south) portion of the site is the existing Church facility, associated parking lot, detention basin and parsonage. The developed site slopes south toward Brighton Road and the remainder of the site slopes north toward Worden Lake. The undeveloped portion of the site is predominantly wooded with the north end of the parcel terminating at Worden Lake. The USDA Soil Conservation Service soil classification for the site is Boyer-Oshtemo Loamy Sand.

- D. **Impact on storm water management:** Description of measures to control soil erosion and sedimentation during grading and construction operations and until a permanent ground cover is established. Recommendations for such measures may be obtained from County Soil Conservation Service.

*-No Change from 2013 Impact Assessment-*

Surface runoff during periods of construction will be controlled by proper methods set forth by the Livingston County Drain Commissioner, including silt fence, pea stone filters, and seed and mulch. A meeting was held with the Livingston County Drain Commissioner to address stormwater management. Their primary recommendation is to maintain the existing drainage patterns as closely as possible.

At the time of construction, there may be some temporary dust., noise, vibration and smoke, but these conditions will be of relatively short duration and shall be controlled by applying appropriate procedures to minimize the effects, such as watering if necessary for dust control.

The Site Plan documents show the proposed locations of all site improvements along with detailed soil erosion control information. The plans will be reviewed by the Livingston County Drain Commissioner's office for compliance with their regulations prior to issuance of a Soil Erosion Control permit.

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

As previously stated the site is the current home of the Brighton Nazarene Church. This facility expansion project will provide a larger gymnasium and additional Sunday School classrooms. The classrooms are only for Sunday School and are not for a 5 day per week school. The existing gymnasium will be converted to additional Sunday School classrooms. All other uses at the Church will remain as they are now. The parking that is displaced with the building addition will be added toward the north end of the site and an underground detention system will be constructed under the new parking lot to address stormwater management.

*-(Add to existing comments from 2013)-*

*-The site is and will remain the home of the Brighton Nazarene Church. The classrooms, as noted, will also be used Monday thru Friday, from September thru May, as School classrooms for Livingston Christian Schools. The School will add an increase of approximately 50 cars using the existing parking facilities on Monday thru Friday.*

*-There will be, on occasion, late afternoon or early evening activities, I.E., Parent/Teacher conferences, and athletic events within the facility.*

*-The existing playground on the western side of the existing facility will be used by the Christian School on Monday-Friday during the mid-day.*

*-The existing parking lot will be used, on occasion, by the Christian School, for daytime activities.*

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

The primary use of the facility is for Sunday Church services however additional activities take place throughout the week. These activities vary from small group meetings to additional worship services. Typically these occur during off peak traffic hours thus do not significantly impact the traffic on Brighton Road. The site is serviced by public water and a septic system. The public water is provided by the City of Brighton. The septic system review is under the jurisdiction of the Livingston County Health Department.

There is not expected impact on Brighton Area Schools and very minimal impact on the police and fire departments.

*-(Add to existing comments from 2013)-*

*The Livingston Christian School will increase the number of employees at the facility by approx. 25 people. The student population will increase the use of the facility by approx. 150-250 students.*

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

The development is currently served by both public water and septic system. With regards to storm water management, the project would be required to meet all local, county and state storm water and erosion control requirements. All of the required information is included in the Site Plan documents.

*-(Add to existing comments from 2013)-*

*-The City of Brighton has been notified of the additional public water supply.*

*-The existing septic system is private and has no impact on public sewer facilities.*

*The private septic system has been designed and installed to the requirements of the Livingston County Health Department and will accommodate the additional usage. The Livingston County Health is currently reviewing an addition to the existing storage capacity of effluent and an additional disposal field to provide additional capacity for school growth. These additions will be installed after required permitting by the Livingston County Health Department.*

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

*-No Change from 2013 Impact Assessment-*

There will be no hazardous materials used or disposed of on this site.

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

*-No Change from 2013 Impact Assessment-*

The Church expansion project will generate a negligible number of trips during the AM and PM peak hours Monday through Friday. Most of the traffic will be generated on Sunday mornings for worship services. Some traffic will occur during the week for various activities that take place. Little of this traffic will occur during peak traffic hours.

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

The facility is primarily used on Sunday mornings therefore a detailed traffic impact study is not necessary.



*-(Add to existing comments from 2013)-*

*-The existing Brighton High School, to the east, starts at 7:35 am and ends at 2:35 pm. The existing Maltby School, to the west, starts at 8:30 am and ends at 3:31 pm.*

*-The Livingston Christian School will start/end at a median time between Brighton High School and Maltby Middle School times.*

*-The Christian School is expected to generate 75 ingress/egress trips from the west and 50 ingress/egress trips from the east prior/after these start times. ( Survey of current school staff and students) Little of this traffic will occur during "peak" traffic hours.*

*-The Livingston County Road Commission (LCRC) reviewed the potential traffic impact of these start/end times at the Nazarene Church facility, in a meeting on 3/17/2015, and have determined that the traffic at the Brighton Road and the Church driveway intersection is defined as "Minor Impact". (per LCRC data, see Attachment B)*

*-Livingston Christian School will not operate during the "peak hour" morning nor afternoon.*

*-A traffic count and traffic model of the Nazarene Church entrance was made by the LCRC in 2010. (see Attachment C)*

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

*-No Change from 2013 Impact Assessment-*

The Church requires a Special Use Permit to operate in a residentially zoned district.

- L. A list of all sources shall be provided.

*-No Change from 2013 Impact Assessment-*

Genoa Township's Submittal Requirements For Impact Assessment

Genoa Township Zoning Ordinances

Soil Survey of Livingston County, Michigan USDA Soil Conservation Service

National Wetland Inventory Plan, United States Department of the Interior, Fish and Wildlife Service

TRAFFIC IMPACT STUDY  
FOR  
LIVINGSTON CHRISTIAN SCHOOL

MAY 1, 2015  
REVISED MAY 20, 2015  
REVISED JUNE 23, 2015

PREPARED FOR:

LIVINGSTON CHRISTIAN SCHOOL/BRIGHTON NAZARENE CHURCH  
7669 BRIGHTON RD  
BRIGHTON, MI

PREPARED BY:

BRENT LAVANWAY, P.E.  
BOSS ENGINEERING  
3121 EAST GRAND RIVER  
HOWELL, MI

## **BACKGROUND**

The Livingston Christian School (LCS) intends to move to the Brighton Nazarene Church for the fall semester 2015. The LCS has been located in Pinckney, Michigan for a number of years and currently has 134 students and 18 staff. It is expected for the 2015/2016 school year that approximately the same number of students and staff will be housed in the new location. This information provided by LCS is included in Appendix A.

Potential growth of the school in its new location could bring the student population to 250 students and 32 staff. The horizon year for the purpose of this study is three years (2018-2019 school year).

The Brighton Nazarene Church is located on Brighton Road in Genoa Township. The Church is on the north side of Brighton Road. The driveway is approximately 300 feet west of the intersection of the Brighton High School driveway which is a signalized three way intersection. Aljoann Drive is a public road located on the north side of Brighton Road between the Brighton High School driveway and the Church driveway. The nearest signalized intersection to the west is the Brighton Road/Bauer Road intersection which is approximately ½ mile west of the Church.

The purpose of this study is to evaluate potential traffic impacts associated with the LCS occupying a portion of the Brighton Nazarene Church. The focus of the study is the anticipated impact of the School on the public road network in immediate proximity to the LCS. Additionally a discussion regarding internal circulation during dropoff and pick up times is included. A supplemental memorandum prepared by Fleis and Vandenbrink, Traffic Consultants, is also included in Appendix C.

## **EXISTING CONDITIONS**

Brighton Road is a three lane road in proximity to the proposed LCS. It consists of eastbound, westbound and center turn lanes through the LCS drive and extending east and west from the drive. The Church driveway consists of one inbound lane and two exiting lanes designated as right and left turn lanes. There is a deceleration lane for the Church driveway on Brighton Road.

The most current available traffic counts from SEMCOG for Brighton Road were taken on May 19 and 20 of 2014. The counts were initiated at 11:00 a.m. on May 19, 2014 and were completed at 11:00 a.m. on May 20, 2014. The results indicate a 24 hour traffic volume of 16,881 vehicles. The a.m. peak hour occurred between 7:00 a.m. and 8:00 a.m. with 1432 vehicles being recorded and the p.m. peak occurred between 5:00 p.m. and 6:00 p.m. with 1484 vehicles being recorded. For additional accuracy of the peak

hours of traffic, Boss Engineering performed traffic counts on May 13, 2015 between the hours of 7:00-8:30 a.m. and 2:00-4:00 p.m. The results are included in Appendix B.

The Brighton Road traffic counts in this location are heavily influenced by Brighton High School and Maltby Middle School traffic, in particular the a.m. peak traffic counts. Brighton High School classes begin at 7:25 a.m. and end at 2:25 p.m. Maltby Middle School classes begin at 8:30 a.m. and end at 3:30 p.m. According to Mike Goryl at the Livingston County Road Commission the schools typically experience a 20 minute "peak".

According to the Highway Capacity Manual (HCM) the Level of Service for a roadway is categorized on a scale from A to F. Descriptions and definitions of the Level of Service are discussed in the Fleis and Vandenbrink memorandum.

### **PROPOSED CONDITIONS**

As previously indicated Livingston Christian School intends to occupy a portion of the Brighton Nazarene Church. The School will be in operation Monday through Friday from September to June. The School is anticipating an initial occupancy of approximately 140 students and 18 staff which is the same as their current school located in Pinckney, Michigan. This study also projects a student population of 250 and a staff count of 32 in the horizon year of 2018-2019.

The recommended start time to avoid overlapping peaks with the Brighton High School and Maltby Middle School is 8:00 a.m. The recommended school completion time is 3:00 p.m. to avoid the overlapping peaks. These times aim to split the difference in start and finish times between the High School and Middle School.

According to an LCS survey approximately 2/3 of the student and staff traffic will be arriving from the west and 1/3 from the east on Brighton Road. Similarly it is anticipated that 2/3 of the student and staff traffic will exit to the west and 1/3 to the east. (25% of total traffic will exit to a destination south and east of the school.)

The detailed information indicated above was provided to the Livingston County Road Commission. Based on delays calculated in the LCRC Synchro computer model and confirmed in the Fleis and Vandenbrink memorandum the Level of Service on Brighton Road is at Level of Service A. The LCRC Synchro model also analyzed the Brighton High School intersection and found it to be operating at an acceptable level. The High School traffic has already cleared at the time of the LCS traffic being generated. As noted in the Fleis and Vandenbrink memorandum the school parking lot left turns operate at Level of Service F with the overall egress driveway approach operating at Level of Service E in both the a.m. and p.m. peaks.

The nearest intersection west is at Bauer Road and is approximately ½ mile from the Church entrance. The Bauer Road signal is far enough from the Church that no impact is anticipated. The Livingston County Road Commission has jurisdiction over the two signals and has the ability to modify signal timing should the need arise although this is not anticipated.

## **CONCLUSIONS AND RECOMMENDATIONS**

- The Livingston Christian School will have minimal impact on Brighton Road in the a.m. and p.m. peak traffic hours for the school. The Brighton Road Level of Service will remain at A.
- The Livingston Christian School will have no impact on the traffic signals located at Brighton High School based on the Livingston County Road Commission Synchro model and Bauer Road based on the distance from the Livingston Christian School to the intersection..
- There will be a significant impact on the Monday through Friday use of the Church parking lot during the September to June time period when the school is in session.
- Information shall be provided to students, parents and staff during orientation that recommends right turns out of the parking lot after drop off and pick up to limit delays within the parking lot. The Traffic Control Director will direct left turn drivers into the left turn lane of the driveway at their discretion. The Traffic Director Roles and Responsibilities are defined in Appendix D. The traffic pick up and drop off Parent and Student Orientation Material is presented in Appendix E.
- Due to potentially long delays within the parking lot and at the driveway exit to Brighton Road school staff must be posted at critical locations to monitor the delays and to direct left turns out of the parking lot.

# **APPENDIX A**



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**LCS Students Per Family**

**2014-15 School Year**

1 Child	2 Children	3 Children	4 Children	5 Children	6 Children
42	24	10	2	0	1

**2015-16 School Year (estimate based on enrollment as of 5/7/15)**

1 Child	2 Children	3 Children	4 Children	5 Children	6 Children
47	23	9	3	0	1

**LCS Drop-Off/Pick-Up Traffic**

**2014-15 School Year (count done in May 2015)**

Parent/Carpool (some remain during day)	60-71
Student Drivers (remain during day)	12
Staff (remain during day)	18
Totals	90-101



# **APPENDIX B**

**Traffic Counts Taken Wednesday, May 13, 2015**  
**Brighton Road/High School**

	<u>Westbound</u>	<u>Eastbound</u>	<u>Brighton Rd Right Turn</u>	<u>Brighton Rd Left Turn</u>
7:00-7:15	26	159	112	175
7:15-7:30	49	117	75	47
7:30-7:45	52	109	2	2
7:45-8:00	68	142	0	2
8:00-8:15	91	143	3	6
8:15-8:30	64	219	7	7

	<u>High School Right Turn</u>	<u>High School Left Turn</u>
7:00-7:15	9	8
7:15-7:30	2	16
7:30-7:45	2	0
7:45-8:00	0	1
8:00-8:15	0	0
8:15-8:30	2	3

**Traffic Counts Taken Wednesday, May 13, 2015**  
**Brighton Road/High School**

	<u>Westbound</u>	<u>Eastbound</u>	<u>Brighton Rd Right Turn</u>	<u>Brighton Rd Left Turn</u>
2:00-2:15	93	78	5	5
2:15-2:30	65	84	6	84
2:30-2:45	167	73	11	13
2:45-3:00	127	85	8	7
3:00-3:15	138	100	10	10
3:15-3:30	162	86	4	6
3:30-3:45	152	124	3	6
3:45-4:00	183	137	6	7
			<u>High School Right Turn</u>	<u>High School Left Turn</u>
2:00-2:15			3	5
2:15-2:30			20	3
2:30-2:45			168	124
2:45-3:00			19	15
3:00-3:15			8	12
3:15-3:30			9	6
3:30-3:45			10	4
3:45-4:00			3	1

**Traffic Counts Taken Wednesday, May 13, 2015**  
**Brighton Road/Nazarene Church**

	<u>Westbound</u>	<u>Eastbound</u>	<u>Right Turn</u>	<u>Left Turn</u>
7:00-7:15	45	333	1	
7:15-7:30	62	193		
7:30-7:45	67	110	1	2
7:45-8:00	73	137	3	
8:00-8:15	101	151	1	
8:15-8:30	67	247	1	1

**Traffic Counts Taken Wednesday, May 13, 2015**  
**Brighton Road/Nazarene Church**

	<u>Westbound</u>	<u>Eastbound</u>	<u>Right Turn</u>	<u>Left Turn</u>
2:00-2:15	55	68	3	1
2:15-2:30	92	85	4	5
2:30-2:45	238	75	3	2
2:45-3:00	130	104	3	3
3:00-3:15	124	104	2	2
3:15-3:30	153	79	0	0
3:30-3:45	167	148	0	1
3:45-4:00	150	116	0	1

## **APPENDIX C**

# MEMO

DRAFT VIA EMAIL

**To:** Mr. Steve Morgan

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**From:** Michael J. Labadie, PE  
Steven J. Russo, E.I.T.  
Fleis & VandenBrink

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**CC:** Mr. Brent LaVanway, PE  
Boss Engineering

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**Date:** June 23, 2015

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**Re:** Livingston Christian School  
Genoa Township, Michigan  
School Operations Evaluation

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## Introduction

This memorandum presents a summary of findings related to on-site parking and student pick-up / drop-off operations at the proposed Livingston Christian School. The School is planning to relocate from its existing location in Pinckney to the existing Brighton Nazarene Church located on the north side of Brighton Road approximately 300 feet west of the signalized Brighton High School Drive in Genoa Township, Michigan. Site access is provided via one driveway to Brighton Road. The school currently has an enrollment of 134 students with potential growth to 250 students.

In order to accommodate school traffic volumes on-site, proper vehicle facilities must be provided for parking and pick-up / drop-off activities. Without proper on-site facilities, off-site traffic operations may be interrupted. The purpose of this study is to determine the necessary design of on-site facilities to accommodate school traffic volumes and pick-up / drop-off activities. The scope of the study was developed based on F&V's knowledge of the study area, understanding of the school operations, and accepted traffic engineering practice.

## Pick-Up / Drop-Off Area

Data collected for previous school studies in the Detroit Metro area indicate that 80% of AM peak hour traffic typically arrives in a peak 20 minute period and 70% of PM peak hour traffic typically arrives in a peak 30 minute period. Therefore, for the purposes of this study, it is assumed that the peak 80% of AM traffic will arrive in a 20 minute period and the peak 70% of PM traffic will arrive in a 30 minute period.

Based on data provided by the Livingston Christian School, the school currently experiences 71 pick-ups in the morning and drop-offs in the afternoon with an enrollment of 134 students. In order to determine the future number of pick-ups / drop-offs the existing ratio of pick-ups / drop-offs to students was extrapolated to a future enrollment of 250 students. The results of this examination indicate that the school will experience 127 future parent pick-ups / drop-offs.

In order to further validate the number of pick-ups / drop-offs, a trip generation forecast was completed for the proposed school based on the rates and equations published by the Institute of Transportation Engineers (ITE) in *Trip Generation, 9<sup>th</sup> Edition*. The ITE trip generation forecast shown in Table 1 predicts that a school

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with an enrollment of 250 students would experience 79 pick-ups / drop-offs. Therefore, the use of 127 pick-ups / drop-offs based on existing school data was determined to be appropriate for use in this study.

**Table 1**  
**Site Trip Generation**

Land Use	ITE Code	Amount	Units	Average Daily Traffic	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Private School (K-12)	536	250	Students		124	79	203	79	108	187
Livingston Christian School		250	Students		180	127	307	127	180	307
<b>DIFFERENCE</b>					<b>56</b>	<b>48</b>	<b>104</b>	<b>48</b>	<b>72</b>	<b>120</b>

Based on 127 pick-ups / drop-offs, and an average drop-off rate of 45 seconds per vehicle, at least 75 feet of sidewalk loading space should be provided. Based on an average pick-up rate of 5.5 minutes per vehicle, at least 325 feet of sidewalk loading space should be provided. Therefore, in order to accommodate both pick-up and drop-off activities, at least 325 feet of sidewalk loading space should be provided.

The pick-up / drop-off loading area should be designed with one-way counterclockwise circulation with a width of 24 feet. This design will provide for student loading and unloading on the passenger side of the vehicle and allow for vehicle passing on the left in the loading zone with minimal vehicle-pedestrian conflicts. Additionally, the pick-up / drop-off zone should be physically separated from the adjacent parking lot to prevent vehicles from entering or exiting the loading zone early.

**Driveway Operations**

Future peak hour vehicle delays and Levels of Service (LOS) were also calculated for the site driveway to Brighton Road using Synchro (Version 9) traffic analysis software for a future enrollment of 250 students. The results of the analysis were based on the methodologies presented in the Highway Capacity Manual 2010 (HCM). Descriptions of LOS "A" through "F" as defined in the HCM are attached for unsignalized intersections. Typically, LOS D is considered acceptable, with LOS A representing minimal delay, and LOS F indicating failing conditions.

The Livingston Christian School site-generated trips shown in Table 1 were assigned to the site driveway based on data provided by Livingston Christian School which indicates that approximately 67% and 33% of site traffic will arrive and depart to the west and east, respectively. The results of the future conditions driveway analysis are attached and are summarized in Table 2.

**Table 2**  
**Future Intersection Operations - 250 Students**

Intersection	Control	Approach	AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS
1. Brighton Road & Site Drive	STOP (Minor)	EB LT	9.4	A	9.6	A
		WB	Free	Free		
		SB	39.0	E	35.5	E

The results of the future conditions analysis indicate that the egress site driveway approach would operate at a LOS E with the egress left turn movement operating at a LOS F during both peak periods. Based on field observations there is only stacking space for 4 left turning vehicles on the driveway approach. Left turn queues longer than 4 vehicles will restrict egress right turning vehicles from exiting the site and could cause





the driveway queue to spill back into the pick-up / drop-off zone. Therefore, a flagger should be located at the site driveway to direct vehicles to turn right when left turn storage is not available to ensure traffic flow within the pick-up / drop-off zone is not restricted.

### **Recommendations**

Based on these findings, F&V recommends the following modifications to the existing site configuration:

1. Create a one-way counter-clockwise circulation with 325 feet of sidewalk loading space for student drop-off / pick-up activities.
2. Physically, separate the loading zone from the adjacent parking lot.
3. Add signage and pavement markings to indicate "Student Loading Zone".

Additionally, the following should be completed to encourage improved use of the student loading facilities:

1. Allocate staff to direct vehicles into the loading zones and restrict students from crossing into the parking lot.
2. Students should enter their parent's vehicles on the passenger side. If a parent wishes to park in a parking space and escort their child to their car that is acceptable.
3. Host an informational meeting and distribute a pamphlet to parents and staff outlining the curb loading zones, circulation pattern, and proposed traffic operations.
4. Instruct parents that all students must be accompanied by an adult between the parking lot and the school building. Similarly, instruct staff that no student should enter the parking lot without an accompanying adult.

Any questions related to this memorandum, study, analyses, and results should be addressed to Fleis & VandenBrink.

**Attachments:** Synchro Results

SJR:mjl

### Level of Service Criteria for Stop Sign Controlled Intersections

The level of service criteria are given in Table 17-2. As used here, control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue until the vehicle departs from the stop line; this time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to the speed of vehicles in queue.

The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. . . .

Exhibit 17-2. Level of Service Criteria for TWSC Intersections

LEVEL OF SERVICE	AVERAGE CONTROL DELAY (sec/veh)
A	$\leq 10$
B	$> 10$ and $\leq 15$
C	$> 15$ and $\leq 25$
D	$> 25$ and $\leq 35$
E	$> 35$ and $\leq 50$
F	$> 50$

Average total delay less than 10 sec/veh is defined as Level of Service (LOS) A. Follow-up times of less than 5 sec have been measured when there is no conflicting traffic for a minor street movement, so control delays of less than 10 sec/veh are appropriate for low flow conditions. To remain consistent with the AWSC intersection analysis procedure described later in this chapter, a total delay of 50 sec/veh is assumed as the break point between LOS E and F.

The proposed level of service criteria for TWSC intersections are somewhat different from the criteria used in Chapter 16 for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, several driver behavior considerations combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, where drivers on the minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized than signalized intersections. For these reasons, it is considered that the total delay threshold for any given level of service is less for an unsignalized intersection than for a signalized intersection. . . .

LOS F exists when there are insufficient gaps of suitable size to allow a side street demand to cross safely through a major street traffic stream. This level of service is generally evident from extremely long total delays experienced by side street traffic and by queueing on the minor approaches. The method, however, is based on a constant critical gap size - that is, the critical gap remains constant, no matter how long the side street motorist waits. LOS F may also appear in the form of side street vehicles' selecting smaller-than-usual gaps. In such cases, safety may be a problem and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior. The latter is more difficult to observe on the field than queueing, which is more obvious.

Source: Highway Capacity Manual, 2000. Transportation Research Board, National Research Council

Intersection	
Int Delay, s/veh	9.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	121	575	350	59	42	85
Future Vol, veh/h	121	575	350	59	42	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	25	60	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	35	92	86	35	35	35
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	346	625	407	169	120	243

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	407	0	407
Stage 1	-	-	407
Stage 2	-	-	1316
Critical Hdwy	4.1	-	6.2
Critical Hdwy Stg 1	-	-	5.4
Critical Hdwy Stg 2	-	-	5.4
Follow-up Hdwy	2.2	-	3.3
Pot Cap-1 Maneuver	1163	-	648
Stage 1	-	-	676
Stage 2	-	-	253
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1163	-	648
Mov Cap-2 Maneuver	-	-	148
Stage 1	-	-	676
Stage 2	-	-	178

Approach	EB	WB	SB
HCM Control Delay, s	3.3	0	39
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1163	-	-	-	148	648
HCM Lane V/C Ratio	0.297	-	-	-	0.811	0.375
HCM Control Delay (s)	9.4	-	-	-	90.1	13.8
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	1.3	-	-	-	5.2	1.7

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection

Int Delay, s/veh 10.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	85	416	508	42	59	121
Future Vol, veh/h	85	416	508	42	59	121
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	25	60	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	35	92	92	35	35	35
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	243	452	552	120	169	346

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	552	0	552
Stage 1	-	-	552
Stage 2	-	-	938
Critical Hdwy	4.1	-	6.2
Critical Hdwy Stg 1	-	-	5.4
Critical Hdwy Stg 2	-	-	5.4
Follow-up Hdwy	2.2	-	3.3
Pot Cap-1 Maneuver	1028	-	537
Stage 1	-	-	581
Stage 2	-	-	384
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1028	-	537
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	581
Stage 2	-	-	293

Approach	EB	WB	SB
HCM Control Delay, s	3.3	0	35.5
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1028	-	-	-	219	537
HCM Lane V/C Ratio	0.236	-	-	-	0.77	0.644
HCM Control Delay (s)	9.6	-	-	-	61.2	23
HCM Lane LOS	A	-	-	-	F	C
HCM 95th %tile Q(veh)	0.9	-	-	-	5.4	4.6

Notes

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

# **APPENDIX D**

## Roles and Responsibilities of Traffic Directors

### Traffic Director 1

- Shall arrive a minimum of 30 minutes prior to a.m. School start time and 30 minutes prior to p.m. dismissal time.
- Shall place all orange traffic control cones at designated locations indicated on the Boss Engineering Traffic Control Plan.
- Shall place the sandwich board signs at the beginning and ending of the "Student Loading Zone"
- Shall be at designated post location at least 20 minutes prior to a.m. drop off and p.m. pick up times.
- Responsible for release of students to queuing vehicles in designated pick up zone at p.m. dismissal.
- Responsible for controlling crosswalk pedestrian traffic to/from main entrance to parent parking lot. **No Students shall cross the crosswalk without being accompanied by a parent. The Director will assure safe passage by halting all vehicle traffic during crosswalk use by pedestrians.**
- Shall pick up and store all cones at the conclusion of school pick up so the parking lot is available for full use by the Church.

### Traffic Director 2

- Shall arrive a minimum of 30 minutes prior to a.m. School start time and 30 minutes prior to p.m. dismissal time.
- Shall be at designated post location at least 20 minutes prior to a.m. drop off and p.m. pick up times.
- Responsible for assuring queuing doesn't extend into the "driveway" area by directing vehicles to an alternative area if this is going to occur.
- Responsible for directing vehicles into the left turn lane if this doesn't create back up into the Student Loading Zone. If a backup occurs the Director must require vehicles to turn right onto Brighton Road.

cc: g:\13-100\docs\appendixd.doc

# **APPENDIX E**

## **Student/Parent Orientation –Traffic Control & Pedestrian Safety**

For the safety of all students, parents, staff and visitors of the Livingston Christian School strict adherence to the following guidelines is required. Please remember: "Safety First"

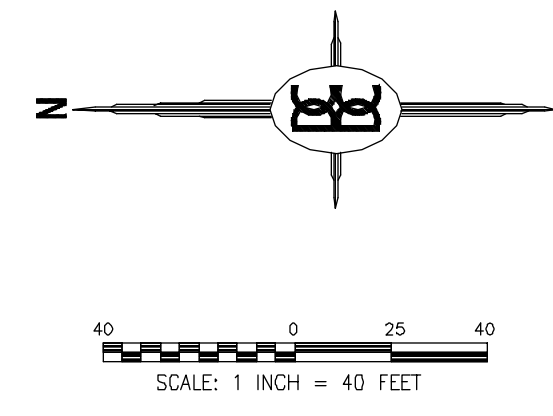
### **A.M. Drop Off**

- All students shall remain in vehicles until the vehicle has safely stopped in the "Student Loading Zone" as indicated by beginning and ending sandwich boards and as represented on the Boss Engineering Traffic Control Plan.
- All students shall exit the vehicles on the passenger side only. No exceptions.
- If parents choose to park to drop off their children they must escort them into the School using the designated crosswalk location and only crossing the crosswalk when instructed to do so by the Traffic Director posted at the main entrance to the School.
- When leaving the parking lot it is preferred that parents turn right onto Brighton Road. If desiring to turn left onto Brighton Road the parents will only be allowed to do so if permitted to enter the Left Turn queuing lane by the Traffic Director posted at the exit.
- If the queuing line becomes excessively long or they are instructed by the Traffic Director the parents shall park and escort their children into the School using the route designated above.

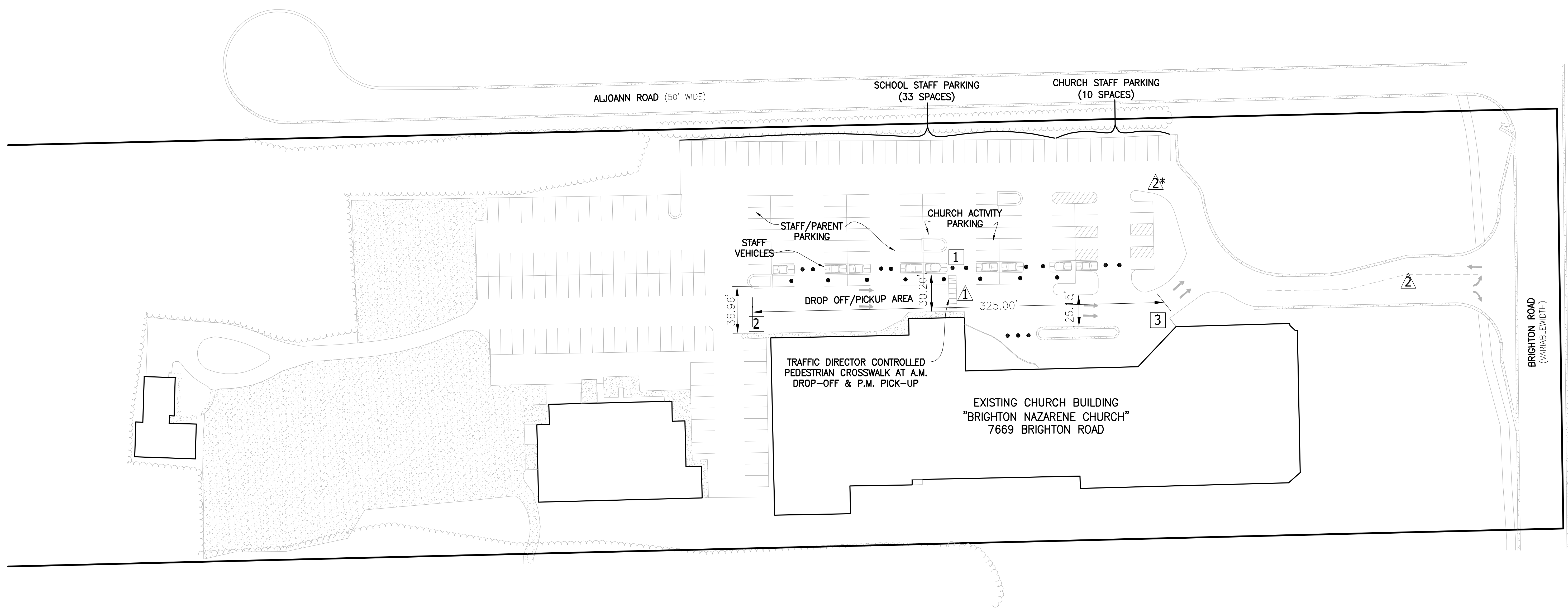
### **P.M. Pick Up**

- All students shall be dismissed to their parents' vehicles in the "Student Loading Zone" by the Traffic Director posted at the main entrance to the School.
- All students shall enter the vehicles on the passenger side only. No exceptions.
- If parents choose to park they must enter the school and escort their children back to their vehicle using the pedestrian route indicated above.
- When leaving the parking lot it is preferred that parents turn right onto Brighton Road. If desiring to turn left onto Brighton Road the parents will only be allowed to do so if permitted to enter the Left Turn queuing lane by the Traffic Director posted at the exit.
- If the queuing line becomes excessively long or they are instructed by the Traffic Director the parents shall park and pick up their children in the School and escort them back to the vehicle using the route designated above.

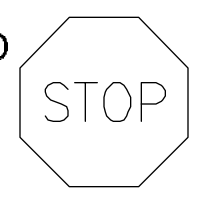




THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS PLAN ARE BASED ON RECORD DRAWINGS, FIELD SURVEY AND OTHER SOURCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVED UTILITY CROSSINGS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVED UTILITY CROSSINGS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVED UTILITY CROSSINGS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.



- SIGN KEY:**
- STOP UNTIL DIRECTED TO CROSS
  - BEGIN STUDENT LOADING ZONE
  - END STUDENT LOADING ZONE



- = ORANGE CONE LOCATION
- = SANDWICH BOARD SIGN LOCATION
- △ = TRAFFIC DIRECTOR LOCATION

- NOTES:**
- ALL ORANGE CONES TO BE PLACED 10' ON CENTER
  - THERE WILL BE A MINIMUM OF 2 TRAFFIC CONTROL DIRECTORS FOR A.M. DROPOFF AND 2 TRAFFIC CONTROL DIRECTORS FOR P.M. PICKUP
  - CONES IN THE PARKING SPACES SHALL REMAIN DURING THE SCHOOL DAY. CONES IN DRIVE AISLES SHALL BE REMOVED BETWEEN DROP OFF AND PICK UP TIMES.

\* MONITOR LOCATION FROM 20 MINUTES PRIOR TO P.M. DISMISSAL TO P.M. DISMISSAL

PROJECT: **B.N.C./L.C.S. FACILITY EXPANSION**

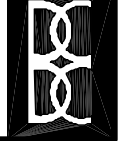
PREPARED FOR: **BRIGHTON NAZARENE CHURCH**

7669 BRIGHTON ROAD  
BRIGHTON, MI 48116  
(810)-227-6600

TITLE: **TRAFFIC CONTROL PLAN**

NO.	BY	REVISION PER	DATE
1	ST	PER TMP REVIEW	5-20-15
2	TD	SCHOOL	5-1-15
3	TD	REVISION PER	

DESIGNED BY: ST  
 DRAWN BY: AEB  
 CHECKED BY:  
 SCALE: 1" = 40'  
 JOB NO. 13-100  
 DATE 5-31-15  
 SHEET NO. **1**



# SITE PLAN FOR BRIGHTON NAZARENE CHURCH FACILITY EXPANSION

## PART OF SE 1/4 SEC. 25, T.2N., R.5E. GENOA TOWNSHIP, LIVINGSTON COUNTY, MI

### PROPERTY DESCRIPTION:

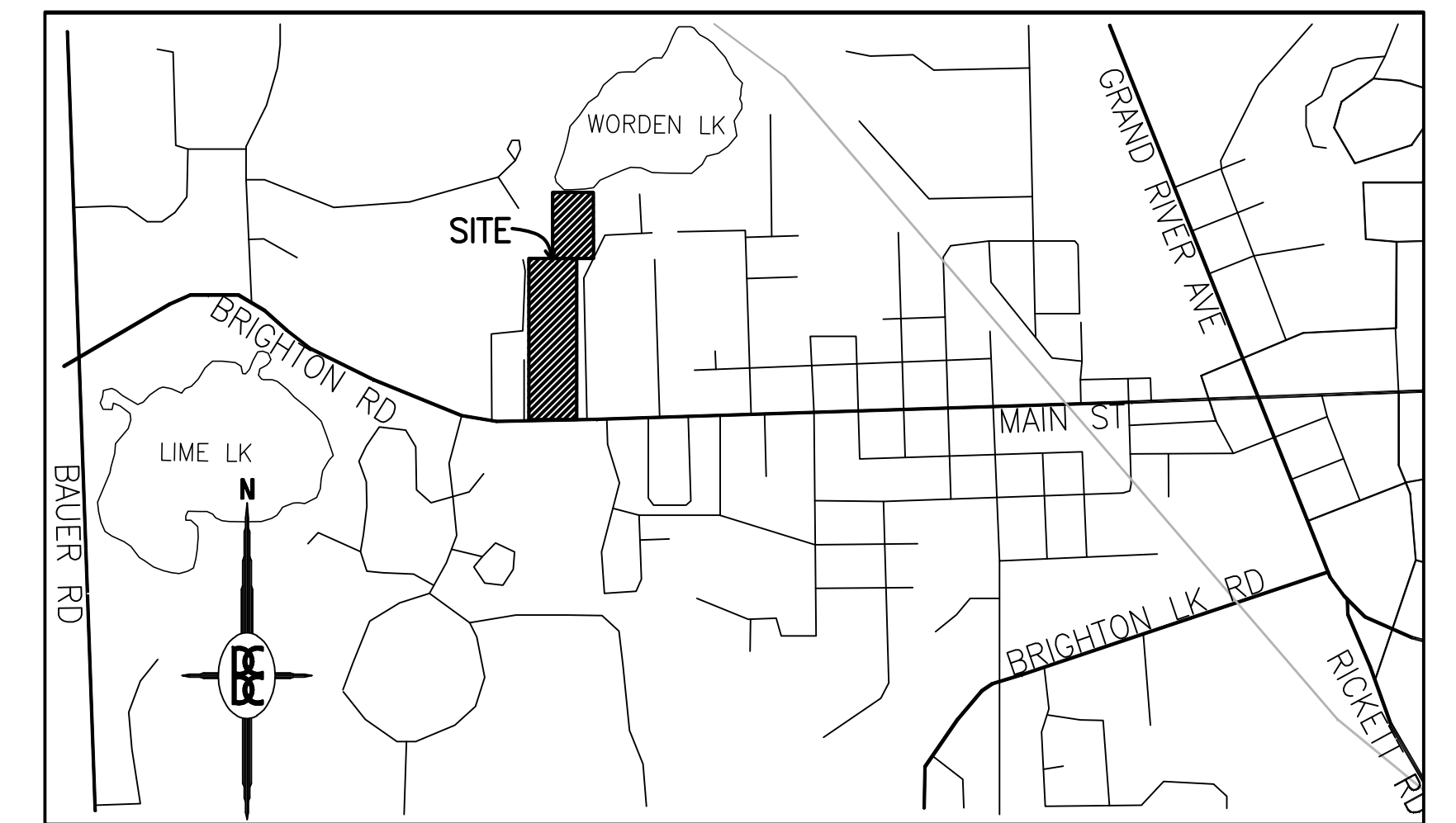
A part of the SE 1/4 of Section 25, T2N-R5E thence N 89°08'13" E 663.28 feet to Point of Beginning, thence continue E 331.64 feet, thence N 01°21'30" W 1341.53 feet, thence S 89°03'20" E 332.74 feet, thence S 01°24'19" E 1341.56 feet to Point of Beginning and also Section 25, T2N-R5E Beginning at the SE 1/4 corner, thence N 01° W 1340.63 feet thence N 89° E 823.63 feet to Point of Beginning, thence N 01° W 891.73 feet, thence N 88° E 400.81 feet, thence S 01° E 893.61 feet, thence S 89° W 400.83 feet to Point of Beginning, containing 16.43 acres, more or less split on 01/23/2012 with 4711-25-400-027 into 4711-25-400-058

### CONSTRUCTION NOTES

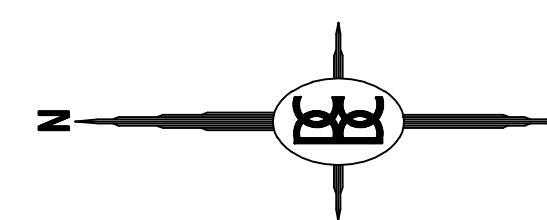
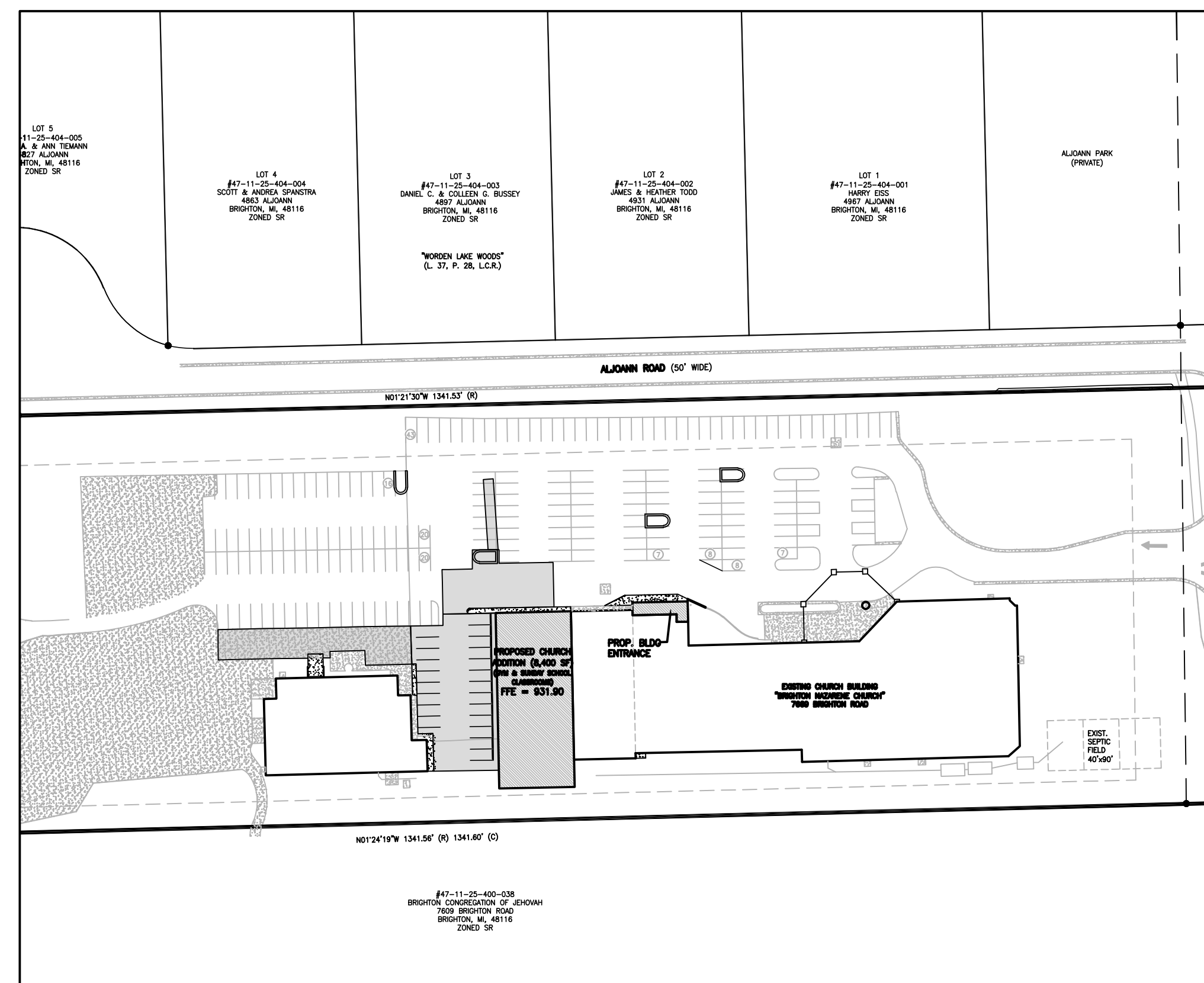
- THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING NOTES AND ANY WORK INVOLVED SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.
  - DO NOT SCALE THESE DRAWINGS AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
  - A GRADING PERMIT FOR SOIL EROSION-SEDIMENTATION CONTROL SHALL BE OBTAINED FROM THE GOVERNING AGENCY PRIOR TO THE START OF CONSTRUCTION.
  - IF DUST PROBLEM OCCURS DURING CONSTRUCTION, CONTROL WILL BE PROVIDED BY AN APPLICATION OF WATER, EITHER BY SPRINKLER OR TANK TRUCK.
  - ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS AND SPECIFICATIONS.
  - THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED TOWNSHIP, COUNTY, AND STATE OF MICHIGAN PERMITS.
  - PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED.
  - ALL BARRIER-FREE FEATURES SHALL BE CONSTRUCTED TO MEET ALL LOCAL, STATE AND A.D.A. REQUIREMENTS.
  - ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
  - THE CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND RIGHTS-OF-WAY, PUBLIC OR PRIVATE, PRIOR TO THE START OF CONSTRUCTION.
  - THE CONTRACTOR SHALL COORDINATE WITH ALL OWNERS TO DETERMINE THE LOCATION OF EXISTING LANDSCAPING, IRRIGATION LINES & PRIVATE UTILITY LINES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING LANDSCAPING, IRRIGATION LINES, AND PRIVATE UTILITY LINES.
  - THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT.
  - THE CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
  - THE CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
  - THE CONTRACTOR SHALL CALL MISS DIG A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
  - ALL EXCAVATION UNDER OR WITHIN 3 FEET OF PUBLIC PAVEMENT, EXISTING OR PROPOSED SHALL BE BACKFILLED AND COMPACTED WITH SAND (MDOT CLASS II).
  - ALL PAVEMENT REPLACEMENT AND OTHER WORKS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWNSHIP, INCLUDING THE LATEST MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
  - THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.
  - NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY DELAY OR INCONVENIENCE DUE TO THE MATERIAL SHORTAGES OR RESPONSIBLE DELAYS DUE TO THE OPERATIONS OF SUCH OTHER PARTIES DOING WORK INDICATED OR SHOWN ON THE PLANS OR IN THE SPECIFICATION OR FOR ANY REASONABLE DELAYS IN CONSTRUCTION DUE TO THE ENCOUNTERING OR EXISTING UTILITIES THAT MAY OR MAY NOT BE SHOWN ON THE PLANS.
  - DURING THE CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL NOT PERFORM WORK BY PRIVATE AGREEMENT WITH PROPERTY OWNERS ADJACENT TO THE PROJECT.
  - IF WORK EXTENDS BEYOND NOVEMBER 15, NO COMPENSATION WILL BE DUE TO THE CONTRACTOR FOR ANY WINTER PROTECTION MEASURES THAT MAY BE REQUIRED BY THE ENGINEER.
  - NO TREES ARE TO BE REMOVED UNTIL MARKED IN THE FIELD BY THE ENGINEER.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY BEYOND THE CONSTRUCTION LIMITS INCLUDING BUT NOT LIMITED TO EXISTING FENCE, LAWN, TREES AND SHRUBBERY.
  - ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND THE NORMAL CONSTRUCTION LIMITS OF THE PROJECT SHALL BE SODDED OR SEEDDED AS SPECIFIED OR DIRECTED BY THE ENGINEER.
  - ALL ROOTS, STUMPS AND OTHER OBJECTIONABLE MATERIALS SHALL BE REMOVED AND THE HOLE BACKFILLED WITH SUITABLE MATERIAL. WHERE GRADE CORRECTION IS REQUIRED, THE SUBGRADE SHALL BE CUT TO CONFORM TO THE CROSS-SECTION AS SHOWN IN THE PLANS.
  - TRAFFIC SHALL BE MAINTAINED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL SIGNS AND TRAFFIC CONTROL DEVICES. FLAG PERSONS SHALL BE PROVIDED BY THE CONTRACTOR IF DETERMINED NECESSARY BY THE ENGINEER. ALL SIGNS SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AT NO COST TO THE TOWNSHIP. NO WORK SHALL BE DONE UNLESS THE APPROPRIATE TRAFFIC CONTROL DEVICES ARE IN PLACE.
  - ALL DEMOLISHED MATERIALS AND SOIL SPOILS SHALL BE REMOVED FROM THE SITE AT NO ADDITIONAL COST, AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
  - AFTER REMOVAL OF TOPSOIL, THE SUBGRADE SHALL BE COMPACTED TO 95% OF ITS UNIT WEIGHT.
  - ALL GRADING IN THE PLANS SHALL BE DONE AS PART OF THIS CONTRACT. ALL DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SUBGRADE PRIOR TO COMPACTING.
  - NO SEEDING SHALL BE DONE AFTER OCTOBER 15 WITHOUT APPROVAL OF THE ENGINEER.
  - ANY EXISTING APPURTENANCES SUCH AS MANHOLES, GATE VALVES, ETC. SHALL BE ADJUSTED TO THE PROPOSED GRADE AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
  - SOIL EROSION MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION HAS BEEN RE-ESTABLISHED.
  - ALL PERMANENT SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF THE MICHIGAN MUTCD MANUAL AND SHALL BE INCIDENTAL TO THE CONTRACT.

### INDEMNIFICATION STATEMENT

THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.



**LOCATION MAP**  
NO SCALE



**OVERALL SITE MAP**  
NO SCALE

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	EXISTING CONDITIONS & DEMOLITION PLAN
3	SITE PLAN
4	GRADING, DRAINAGE & SOIL EROSION CONTROL PLAN
5	UTILITY PLAN
6	LANDSCAPE & LIGHTING PLAN
7	CONSTRUCTION NOTES & DETAILS
8	CONSTRUCTION NOTES & DETAILS
9	WATERMAIN PLAN & PROFILE
10	FLOOR PLAN
11	ELEVATION VIEWS

## BRIGHTON NAZARENE CHURCH FACILITY EXPANSION

PREPARED FOR:

BRIGHTON NAZARENE CHURCH  
7669 BRIGHTON ROAD  
BRIGHTON, MI 48116  
CONTACT: PASTOR BEN WALLS  
810.227.6600

### ARCHITECT

SAHBA LA'AL, ARCHITECT  
MACMULLAN ARCHITECTS  
308 NORTH RIVER STREET  
YPSILANTI, MICHIGAN 48198

PREPARED BY:



(E-MAIL: [be@bosseng.com](mailto:be@bosseng.com))  
3121 E. GRAND RIVER AVE.  
HOWELL, MI 48845  
(800) 246-6735 FAX (517) 548-1670

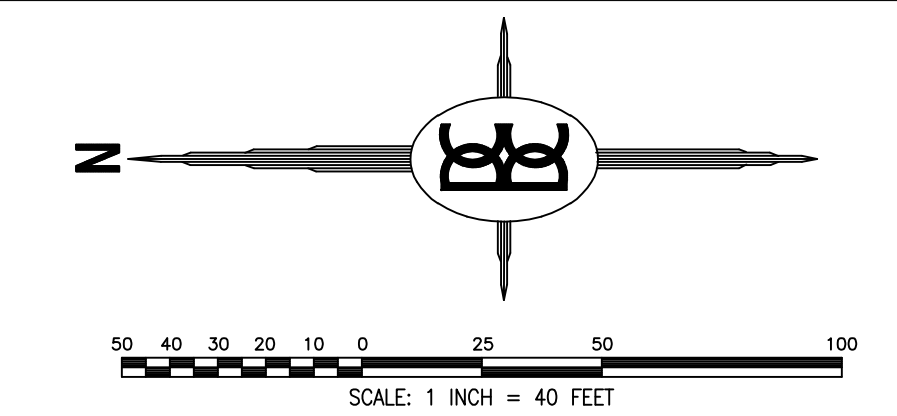
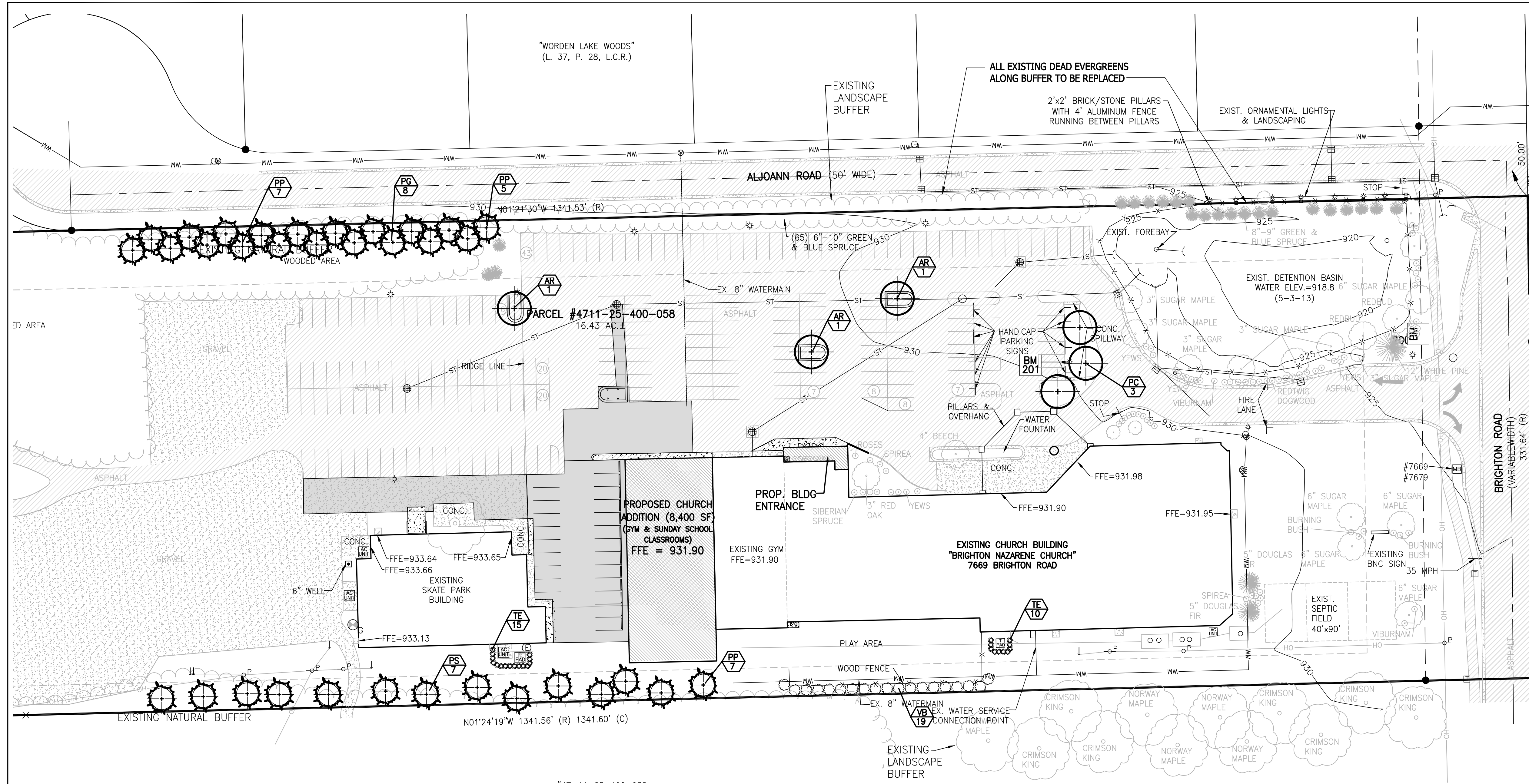
5	ST	PER CLIENT REVIEW	5/14/14
4	ST	PER TWP. REVIEW	10/2/13
3	ST	PER TWP. REVIEW	8/26/13
2	ST	PER PLANNING COM.	7/30/13
1	ST	TWP. REVIEW	7/2/13
NO	BY	CK	REVISION

ISSUE DATE: 5/31/13

JOB NO. 13-100

# 1





PROPOSED (PR)	EXISTING (EX)	
T/C	+922.08	CONTOUR
XXXXXX		STORM DRAINAGE FLOW
FF	FF	SPOT ELEVATION
FG	FG	FINISHED FLOOR ELEVATION
T/A	T/A	FINISHED GRADE ELEVATION
T/W	T/W	TOP OF ASPHALT
F/L	F/L	TOP OF CURB / CONCRETE
T/P	T/P	TOP OF WALK
B/P	B/P	FLOW LINE
RIM	RIM	TOP OF PIPE
INV	INV	BOTTOM OF PIPE
MH	MH	RIM ELEVATION
IN	IN	INVERT ELEVATION
CB	CB	MANHOLE STRUCTURE
RY	RY	INLET STRUCTURE
ES	ES	CATCHBASIN STRUCTURE
ES	ES	REARWAY STRUCTURE
ES	ES	END-SECTION
GV	GV	GATEVALVE STRUCTURE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
FM	FM	FORCE MAIN
PS	PS	PRESSURE SEWER
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
FO	FO	FIBER OPTIC
OH	OH	OVERHEAD WIRE
C	C	CABLE
E	E	ELECTRIC
G	G	GAS
T	T	TELEPHONE
MANHOLE	MANHOLE	MANHOLE
INLET / CATCHBASIN	INLET / CATCHBASIN	INLET / CATCHBASIN
FLARED END-SECTION	FLARED END-SECTION	FLARED END-SECTION
GATE VALVE	GATE VALVE	GATE VALVE
HYDRANT	HYDRANT	HYDRANT
UTILITY POLE	UTILITY POLE	UTILITY POLE
FENCE SIGN	FENCE SIGN	FENCE SIGN
CONCRETE	CONCRETE	CONCRETE
ASPHALT	ASPHALT	ASPHALT
DOUBLE FIXTURE LIGHT POLE	DOUBLE FIXTURE LIGHT POLE	DOUBLE FIXTURE LIGHT POLE
SINGLE FIXTURE LIGHT FIXTURE	SINGLE FIXTURE LIGHT FIXTURE	SINGLE FIXTURE LIGHT FIXTURE
WALL MOUNTED LIGHT FIXTURE	WALL MOUNTED LIGHT FIXTURE	WALL MOUNTED LIGHT FIXTURE
GROUND LIGHT FIXTURE	GROUND LIGHT FIXTURE	GROUND LIGHT FIXTURE
FOOT CANDLES ON SITE	FOOT CANDLES ON SITE	FOOT CANDLES ON SITE
FOOT CANDLES OFF SITE	FOOT CANDLES OFF SITE	FOOT CANDLES OFF SITE
FOOT CANDLES CONTOURS	FOOT CANDLES CONTOURS	FOOT CANDLES CONTOURS

KEY	QUAN.	BOTANICAL NAME	COMMON NAME	SIZE	REMARK
<b>TREES</b>					
AR	3	Acer rubrum 'Red Sunset'	Red Sunset Maple	2 1/2" cal.	B-B
PC	3	Pyrus calleryana 'Bradford'	Bradford Callery Pear	2 1/2" cal.	B-B
PG	8	Picea glauca	White Spruce	6'-8" ht.	B-B
PP	19	Picea pungens var. 'Glauca'	Colorado Blue Spruce	6'-8" ht.	B-B
PS	7	Pinus strobus	Eastern White Pine	6'-8" ht.	B-B
<b>SHRUBS</b>					
TE	25	Thuja occidentalis 'Emerald'	Emerald Arborvitae	24"-36" ht.	B-B
VB	19	Viburnum x burkwoodii	Burkwood Viburnum	36" ht.	B-B

**BOSS ENGINEERING**  
ENGINEERS SURVEYORS PLANNERS  
LANDSCAPE ARCHITECTS  
3121 E. GRAND RIVER AVE.  
HOWELL, MI 48843  
(800) 246-6335 FAX (517) 948-1670

PROJECT: **B.N.C. FACILITY EXPANSION**  
PREPARED FOR: **BRIGHTON NAZARENE CHURCH**  
7669 BRIGHTON ROAD  
BRIGHTON, MI 48116  
810-227-6600

NO.	BY	DATE	REVISION PER
5	ST	5/14/14	PER CLIENT REVIEW
1	TD	7/20/13	PC MEETING

DESIGNED BY: TD  
DRAWN BY: TD  
CHECKED BY:  
SCALE: 1" = 40'  
JOB NO. 13-100  
DATE: 5-31-13  
SHEET NO. 6



GENOA CHARTER TOWNSHIP APPLICATION  
Sketch Plan Review

GENOA TOWNSHIP

MAY 29 2015

TO THE GENOA TOWNSHIP PLANNING COMMISSION:

APPLICANT NAME & ADDRESS: Brighton Naz. Church  
*If applicant is not the owner, a letter of Authorization from Property Owner is needed.*

OWNER'S NAME & ADDRESS: Brighton Naz.

SITE ADDRESS: 7669 BRIGHTON RD, BRIGHTON PARCEL #(s): \_\_\_\_\_

APPLICANT PHONE: (810) 227-6600 OWNER PHONE: ( ) \_\_\_\_\_

LOCATION AND BRIEF DESCRIPTION OF SITE: Brighton Naz. Church

BRIEF STATEMENT OF PROPOSED USE: Entry to new Addition (Revision)

THE FOLLOWING IMPROVEMENTS ARE PROPOSED: (see attached)

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

BY: Pastor Ben D. Walls

ADDRESS: 7669 Brighton Rd. Brighton Mich.

**Contact Information** - Review Letters and Correspondence shall be forwarded to the following: 517-420-8105  
1.) Gary Anscombe (G.C.) of Kingston Const. at ganscombe@sbcglobal.net  
Name Business Affiliation Email Address

**FEE EXCEEDANCE AGREEMENT**  
All sketch plans are allocated one (1) consultant review and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal for a Land Use Permit. By signing below, applicant indicates agreement and full understanding of this policy.  
SIGNATURE: Pastor Ben D. Walls DATE: 5/28/15  
PRINT NAME: Ben D. Walls PHONE: 810-227-6600

**OPEN PUBLIC HEARING #2...** Review of a sketch plan application for an amendment to the approved building elevations for Brighton Church of the Nazarene, located at 7669 Brighton Road, Brighton, Michigan, parcel # 4711-25-400-058. The request is petitioned by Brighton Nazarene Church.

Eric Rauch rejoined the meeting.

Gary Anscombe, Construction Manager for the church addressed the Planning Commission. He apologized to the Board and the Township and knows that he should have applied for an amended site plan and the church had no reason to think of it. It takes full responsibility.

The approved elevation was not a buildable design. Therefore, the amendment is requested. The north half of the elevation drained into the wall. The roof was changed to prevent ice dams and water pooling. Additionally, the handicap elevator needed to be changed.

There will be a new color in front. The colored rendering is not an exact duplicate of the colors, but samples were provided. They were unable to exactly duplicate the brick color, so there has been a change to allow for which areas will have brick. The roof line has been changed to accommodate water/snow. This has already been built. There is no brick left with which to meet the ordinance.

Chris Grajek asked about using cultured stone. The petitioner indicated that it's possible to use brick or cultured stone. The split faced block could possibly be used to match.

Mr. Rauch asked about utilizing an awning structure to break it up.

Mr. Mortensen indicated he would not be comfortable approving anything without a rendering. The petitioner could obtain one within a week or so. The next meeting is July 13.

Mr. Grajek asked about the percentage of brick. Ms. Foster indicated since it's in a residential section, no percentages apply.

Mr. Grajek indicated the renderings would be helpful if the colors are accurate.

The petitioner indicated he would like to continue working on the interior of the entrance system while this matter is pending. The building department would need him to do that.

The petitioner will look into making the south wall a darker color and adding windows to the south wall. Ms. VanMarter suggested carrying the brown of the roof up the south wall and north wall.

Mr. Mortensen and Mr. McManus would like to see renderings as well.

A call to the public was made.

Mike Barrett addressed the Planning Commission. He asked for clarification regarding percentage of brick.

Colleen Bussy addressed the Planning Commission and indicated she thinks the structure is too big. Jay Johnston again addressed the Planning Commission regarding the color. Andrea Spanford indicated she thinks it looks like a warehouse.

The call to the public was closed.

The architect is present and agrees with all of the ideas/comments.

**Planning Commission disposition of petition**

A. Disposition of Amended Site Plan Building Elevations (received on 05-29-15)

**Motion** by James Mortensen to recommend approval of the amended site plan subject to future approval of exterior building materials. Staff may issue a temporary land use permit to allow the petition to continue working on the interior. The temporary land use permit will expire on July 21, 2015 if not renewed. Support by Diana Lowe. **Motion carried unanimously.**

**OPEN PUBLIC HEARING #3...**Review of the Genoa Charter Township Capital Improvement Plan.

Mr. Mortensen has an issue with the road projects rejected by the voters being included. He is also opposed to the solar panels.

**Planning Commission disposition of petition**

A. Disposition of Capital Improvement Plan

**Motion** by James Mortensen to adopt the capital improvement plan with the exception of the road projects and solar panel. Support by Diana Lowe. **Motion carried unanimously.**

**Administrative Business:**

- *Staff report. Kelly VanMarter gave a staff report to the Planning Commission.*
- *Approval of May 11, 2015 Planning Commission meeting minutes. **Motion** by Barbara Figurski and support by James Mortensen to adopt the minutes as amended. **Motion carried unanimously.***
- *Member discussion.*
- *Adjournment. **Motion** to adjourn by Barbara Figurski at 10:04 p.m. Support by John McManus. **Motion carried unanimously.***

July 8, 2015

Planning Commission  
Genoa Township  
2911 Dorr Road  
Brighton, Michigan 48116

<b>Attention:</b>	Kelly Van Marter, AICP Assistant Township Manager and Planning Director
<b>Subject:</b>	Brighton Nazarene Church – Sketch Plan Review #2
<b>Location:</b>	7669 Brighton Road – northwest corner of Brighton and Aljoann Roads
<b>Zoning:</b>	SR Suburban Residential

Dear Commissioners:

As requested, we have reviewed the revised submittal requesting a revision to the building façade from the previously approved site plan for the Brighton Nazarene Church at 7669 Brighton Road.

We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance and provide the following comments for your consideration.



*Picture of new façade (proposal will remove blue color and add masonry to match along lower level)*

### **Proposal/Process**

The applicant requests sketch plan review/approval for changes to approved building elevations for the Brighton Nazarene Church. Specifically, the submittal proposes changes in materials and design to the east elevation, which was approved as part of the 2013 expansion project.

Since a) the proposed change in materials was not deemed to be to a higher quality material and b) the applicant has already initiated construction of the new façade, the Township determined that Planning Commission review/approval is necessary.



## Sketch Plan Review

The only item for consideration is the change in building materials and design – no other changes are proposed to the approved site plan as part of this request. The approved plans included brick along the lower level of the addition with metal siding and a pitched metal roof above.

The rendering included with the revised submittal includes mostly metal siding, although masonry to has been added along the lower level of the addition. The roof has also been changed from a pitched roof to a flat roof.

Additionally, the blue color has been removed from the rendering with a gray/tan-type color in its place as depicted in the rendering. However, the sample provided by the applicant at the 6/8/15 meeting indicated that the rendering and material colors do not match. The revised submittal indicates that the proposed material and color samples will be presented to the Commission at the upcoming meeting.

Although the proposed awning is in keeping with the texture and color of the building façade, it is our opinion that it may be too similar. The awning was suggested to help break up the height of the façade and delineate the entryway at a pedestrian scale. The proposed awning is too similar to the façade material and does not provide enough architectural variation to break up the wall. The applicant may want to submit further detail on the proposed awning to determine if it meets the intent of the requested design standards.

In our opinion, this is an improvement from what was previously proposed. The materials and color palette appear to match the rest of the building and are generally more consistent with the residential character of the area; however, the applicant must demonstrate that materials and color will match and/or be compatible with the remainder of the building.

Ultimately, Planning Commission has review/approval authority over the proposed changes.

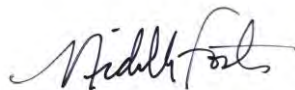
Should you have any questions concerning this matter, please do not hesitate to contact our office. We can be reached by phone at (248) 586-0505 or via e-mail at [borden@lslplanning.com](mailto:borden@lslplanning.com) and [foster@lslplanning.com](mailto:foster@lslplanning.com).

Sincerely,

**LSL PLANNING, INC.**



Brian V. Borden, AICP  
Principal Planner



Michelle Foster  
Project Planner



ENTRY RENDERING

NO SCALE

BRIGHTON CHURCH OF THE NAZARENE

**Sahba La'al,** Architect

Tel: 734 761 2344  
Fax: 734 761 3245  
sahla@umich.edu

1450 Jones Drive  
Ann Arbor  
Michigan 48105

MASONRY COLORS FOR NEW ENTRY

GENOA TOWNSHIP  
JUN 25 2015



**BENOA TOWNSHIP**

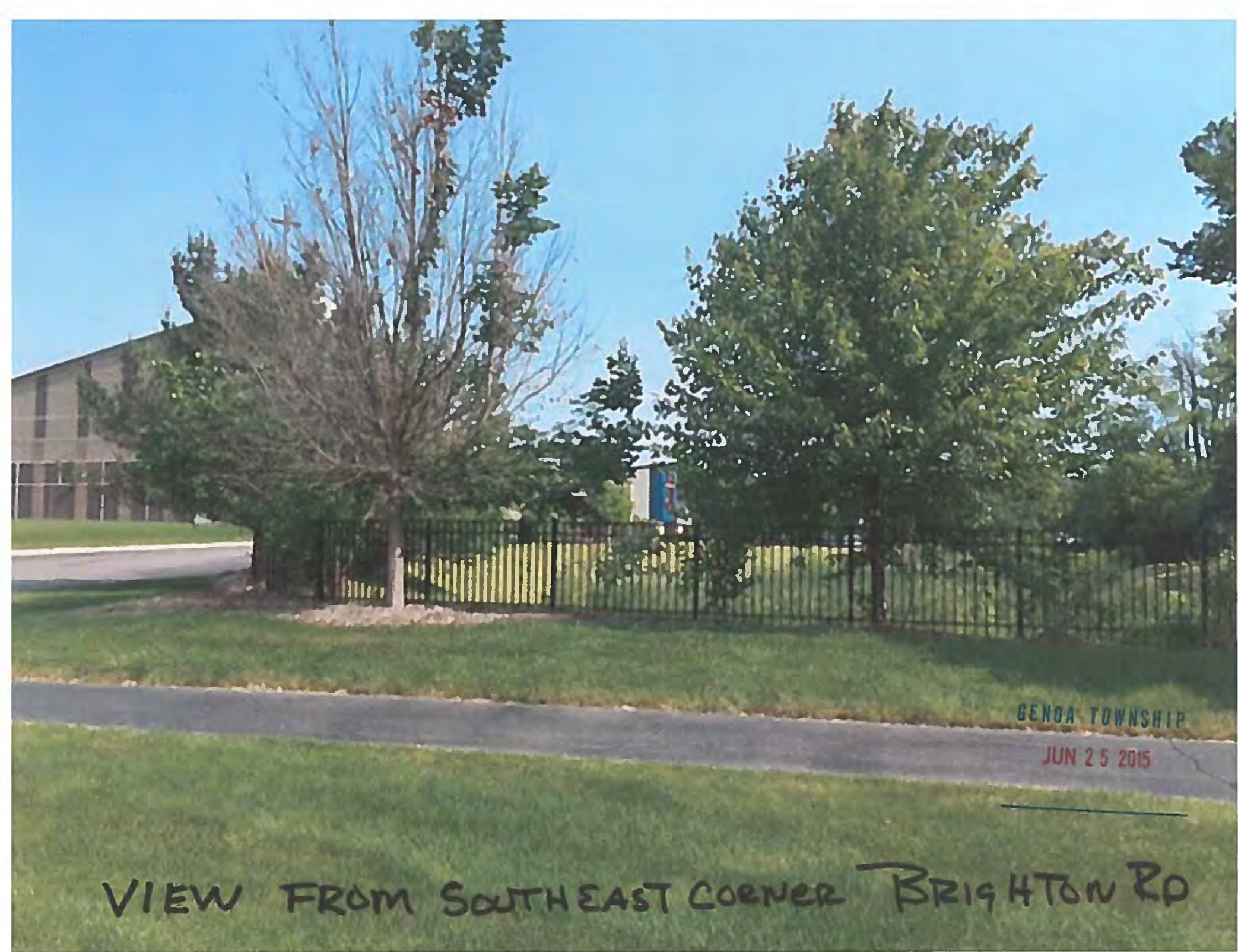
**JUN 25 2015**

**VIEW AT FRONT DRIVEWAY BRIGATON RD**



VIEW AT MIDPOINT BRIGHTON RD

BENGA TOWNSHIP  
JUN 25 2015



GENOA TOWNSHIP

JUN 25 2015

VIEW FROM SOUTHEAST CORNER BRIGHTON RD



GENOA TOWNSHIP

JUN 25 2015

VIEW FROM ALJOANN + BRIGHTON RD

GENOA TOWNSHIP

JUN 25 2015

(ALJOANNA)  
VIEW FROM 25% OF DISTANCE FROM BIRKHEAD

R

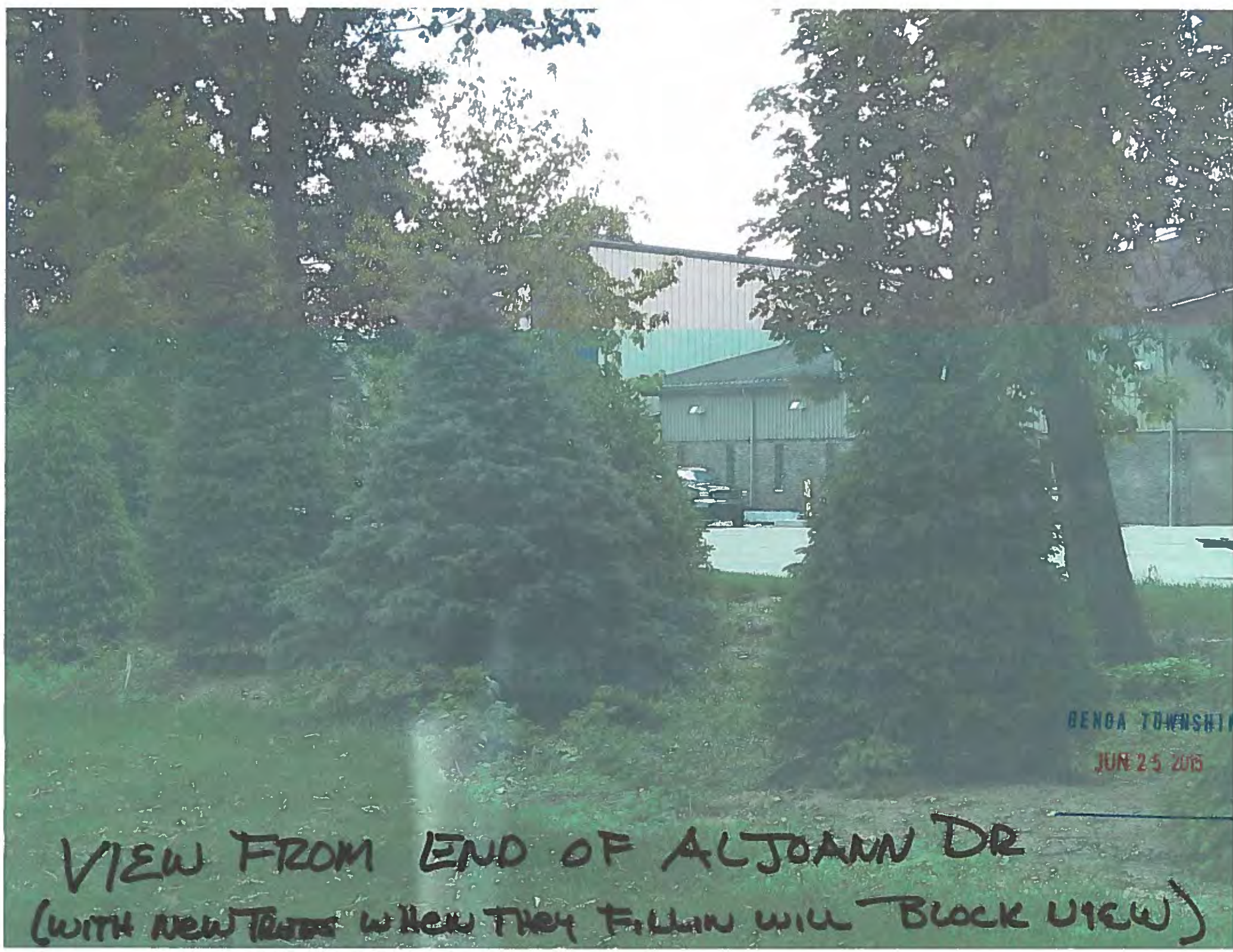




BRITISH COLUMBIA

1997/12/15

View 1/2 way Down Aljourn from  
Brighton Rd



BENGA TOWNSHIP

JUN 25 2015

VIEW FROM END OF ALJOANN DR  
(WITH NEW TREES WHEN THEY FILL IN WILL BLOCK VIEW)



GENOA CHARTER TOWNSHIP
Application for Site Plan Review

GENOA TOWNSHIP JUN 02 2015

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS: METRO DESIGN & BUILD INC 20031 CARLYSLE DEARBORN 48124

OWNER'S NAME & ADDRESS: CHARLES PAISLEY 49169 ALPHA DR. WIXOM 48393

SITE ADDRESS: GRAND RIVER : LATSON PARCEL #(s):

APPLICANT PHONE: (313) 563-5847 OWNER PHONE: (248) 860-8365

OWNER EMAIL: CHARLES@UNIONPACIFIC HOLDINGS.COM / METRO791@AMERITECH.NET

LOCATION AND BRIEF DESCRIPTION OF SITE: OUT LOT IN WAL MART PARKING LOT BETWEEN BOB EVANS ; BENNIGANIS

BRIEF STATEMENT OF PROPOSED USE: NEW CULVERS RESTAURANT

THE FOLLOWING BUILDINGS ARE PROPOSED: 1 STORY, 3954 SF CULVER'S

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

BY: [Signature]

ADDRESS: 20031 CARLYSLE DEARBORN, MI. 48124

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

1.) RON NELSON of METRO DESIGN; BUILD at METROTAC AMERITECH  
Name Business Affiliation E-mail Address • NEI

**FEE EXCEEDANCE AGREEMENT**

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

SIGNATURE: [Signature] DATE: 6-1-15  
PRINT NAME: RONALD J. NELSON PHONE: 313-563-5847  
ADDRESS: 20031 CARLYSLE DEARBORN, MI. 48124



July 8, 2015

Planning Commission  
Genoa Township  
2911 Dorr Road  
Brighton, Michigan 48116

<b>Attention:</b>	Kelly Van Marter, AICP Assistant Township Manager and Planning Director
<b>Subject:</b>	Culver's drive-through restaurant – PUD Site Plan Review #2
<b>Location:</b>	Southwest corner of Grand River Avenue and Latson Road
<b>Zoning:</b>	NR-PUD Non-Residential Planned Unit Development District

Dear Commissioners:

At the Township's request, we have reviewed the revised site plan (dated 6/25/15) proposing the construction of a new Culver's drive-through restaurant on the west side of Lot #4 in the Livingston Commons PUD (adjacent to the recently approved Panera Bread drive-through restaurant).

The site is located at the southwest corner of Grand River Avenue and Latson Road within the Livingston Commons PUD, which is zoned NR-PUD. We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance and PUD Agreement for the development.

As a side note, the Township recently approved a Panera Bread drive-through restaurant on the east half of Lot #4, as well as amendments to the PUD Agreement for Livingston Commons.

**A. Summary**

1. The Planning Commission may reduce/waive side yard parking lot setbacks per Section 14.06.11.
2. The Planning Commission has approval authority over the building elevations, including materials and colors.
3. In our estimation, the building provides too much fiber cement siding and EIFS (at least 80% of each façade must be natural materials, such as brick or stone).
4. The applicant must provide material and color samples for the Commission's consideration.
5. The drive through is deficient by 2 stacking spaces. The applicant requests a reduction in the stacking space requirement given the nature of the business, which typically has a lower percentage of drive through traffic. In our opinion, this requires a deviation via the PUD Agreement.
6. The main east/west drive aisle is deficient in terms of width for two-way traffic.
7. Large delivery trucks will need to drive over curbs to navigate the site. This should be avoided to the greatest extent possible.
8. The landscape plan is deficient by 5 canopy trees.
9. The waste receptacle area appears to be larger than needed.
10. We suggest an easement or shared access agreement be provided allowing cross access between both halves of Lot #4.
11. The submittal does not include details or cut sheets for the pole mounted light fixtures.
12. The proposal includes 4 wall signs – 1 is permitted and a 2<sup>nd</sup> may be allowed by the Planning Commission.
13. The applicant must demonstrate/confirm compliance with the standards of Section 16.07.02(e) for the electronic changeable message sign.
14. The proposed menu boards exceed the maximum area allowed by Ordinance.



*Aerial view of site and surroundings (looking north)*

## **B. Proposal**

In accordance with the recently approved changes to the Livingston Commons PUD, the applicant requests site plan review/approval for a new Culver’s drive-through restaurant on the west half of Lot #4.

Recent amendments to the PUD Agreement permit 2 drive-through restaurants on Lot #4 – the recently approved Panera Bread and the currently proposed Culver’s.

## **C. Use Conditions (Drive-through Restaurant)**

Section 7.02.02(j) provides the following conditions for drive-through restaurants:

- 1. Principal and accessory buildings shall be setback fifty (50) feet from any adjacent public right of way line or property line.**

This standard is met.

- 2. The establishment of a new drive-through restaurant shall require the lot be separated a minimum of five hundred (500) feet from any other lot containing a drive-through restaurant.**

The proposed Culver’s is within 500 feet of the recently approved Panera Bread; however, the PUD Agreement specifically allows for two drive-through restaurants on Lot #4, regardless of their spacing.

- 3. Only one (1) access shall be provided onto any street.**

Lot #4 does not provide direct access to/from Grand River Avenue or Latson Road. Vehicular access is provided via the existing service drive, which provides access to both public roadways.

- 4. Such restaurants constructed adjacent to other commercial developments shall have a direct vehicular access connection where possible.**

The proposed site plan includes access to the remainder of the Livingston Commons development.

**D. Site Plan Review**

**1. Dimensional Requirements.** As described in the table below, the proposed Panera Bread complies with the dimensional standards for this PUD:

District	Lot Size		Minimum Setbacks (feet)				Max. Height	Lot Coverage
	Lot Area (acres)	Width (feet)	Front Yard	Side Yard	Rear Yard	Parking		
NR-PUD	1	150	70	15	50	22 front 10 side/rear	35'	35% building 75% impervious
Proposal	1.12	220 (Grand River)	95 (Grand River)	126 (W) 34 (E)	54 (S)	20 front 0 side* 15 rear	22'-4"	8.1% building 75% impervious

\* Section 14.06.11 allows the Planning Commission to reduce or waive side or rear parking lot setbacks where a shared access driveway, connected parking lots, frontage road, or rear service drive is provided.

**2. Building Materials and Design.** The proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission.

Building materials include stone veneer, fiber cement siding and EIFS. The PUD Agreement requires at least 80% of wall surfaces to be natural materials (such as brick or stone); however, in our estimation, the proposed building does not appear to meet this standard (too much fiber cement siding and EIFS). The applicant should either provide material calculations for each façade to demonstrate compliance or increase the use of natural materials (stone).

Additionally, the applicant must provide color renderings and a material/color sample board for the Commission’s consideration.

**3. Parking.** As outlined in the table on Sheet C-1, 43 spaces are required for the proposed Culver’s. Additionally, 2 RV spaces, 3 waiting spaces and 10 stacking spaces are also required.

The plan provides for 62 parking spaces, including the required barrier free, RV and waiting spaces. As a side note, the parking spaces that are marked as ‘large vehicle spaces’ are striped as typical 9’ by 18’ spaces on the plans. The applicant must correct this inconsistency.

Additionally, the drive through lane provides only 8 of the 10 required stacking spaces. We have reviewed Culver’s restaurants in several communities and they have previously demonstrated that drive through usage is less than a conventional fast food type restaurant, in which case fewer stacking spaces typically works.

The Impact Assessment states that the nature of this particular business entails a much smaller percentage of drive through traffic. Accordingly, the applicant requests that the Township grant a reduction in the required number of stacking spaces. The Ordinance does not provide discretion on this matter and we are of the opinion that it requires a deviation via the PUD Agreement.

For the most part, the parking spaces and drive aisles meet or exceed the dimensional standards of Section 14.06; however, a portion of the east/west drive aisle nearest Grand River is deficient in terms of width (24’ required vs. 17’ provided). Lastly, Sheet C-1 identifies the use of looped (double striped) spaces.

4. **Pedestrian Circulation.** The plan identifies the existing sidewalks along Grand River with a new connection proposed between the public sidewalk and the site. Similar to the approved Panera development, crosswalk striping has been added to increase pedestrian safety. Sidewalks are also proposed along the majority of the building, separating parking and drive aisles from the building.
5. **Vehicular Circulation.** As noted above, the site does not have direct access to Grand River, but rather has access to/from the internal service drive and across the Panera site (east half of Lot #4).

As previously noted, the main east/west drive aisle does not provide the required width (24’) for two-way traffic. Additionally, the truck turning template shown on Sheet C-1 indicates that large delivery trucks will drive over at least two curbed areas. This is likely to result in future issues of site maintenance and should be avoided to the greatest extent possible.

6. **Loading.** The Impact Assessment states that deliveries will take place outside of business hours with sufficient space in the drive through lane to accommodate loading/unloading.
7. **Landscaping.** We have reviewed the landscape plan as follows:

Location	Requirements	Proposed	Comments
Front yard greenbelt (Grand River & Latson)	8 canopy trees 8 evergreen trees 30 shrubs 20-foot width	3 canopy trees 3 existing trees 63 shrubs 22-foot width	Deficient by 2 canopy trees and 8 evergreen trees*
Parking lot	16 canopy trees hedgerow	11 canopy trees 2 existing trees hedgerow	Deficient by 3 canopy trees*

\* The applicant has indicated that additional trees will be provided, but the revised landscape plan does not reflect this.

8. **Waste Receptacle and Enclosure.** The project includes a new waste receptacle area southeast of the proposed building with a 6-foot masonry enclosure faced with stone veneer matching that used on the building.

Details on Sheet A-12 show the required concrete base pad and enclosure. The area enclosed is much larger than needed for the dumpster shown. We request the applicant explain the need for an over-sized waste receptacle area. Additionally, vehicular access to this area is accommodated via the Panera site. The applicant should provide an easement or shared access agreement across the two halves of Lot #4.

9. **Exterior Lighting.** The submittal proposes 3 new pole-mounted light fixtures; however, pole height and cut sheets were not provided for these lights. The applicant needs to provide details.

The plan also proposes 24 wall mounted fixtures. Details and cut sheets provided show that these fixtures are downward directed in accordance with the requirements of Section 12.03.

The photometric grid provided shows readings above 1.0 fc at the east lot line; however, this lot line is shared with Panera within the same PUD. As such, we do not believe this spillover will create any adverse impacts.



**10. Signs.** In total, the submittal includes 1 monument sign (with a reader board), 4 wall signs and 2 menu boards. Per Section 16.07, 1 monument sign, 1 wall sign and 2 menu boards are permitted.

The Planning Commission may permit a 2<sup>nd</sup> wall sign in certain circumstances, such as obstructed views and building orientation. The monument sign is 60 square feet in area, per the Ordinance and PUD agreement.

The electronic changeable message component of the monument sign complies with most of the standards of Section 16.07.02; however, the applicant must confirm/demonstrate compliance with the requirements of paragraph (e).

The Ordinance allows up to 2 menu boards with a maximum size of 16 square feet per board and directional signs with no advertising are allowed at driveways. Any proposed signage in excess of current Ordinance standards should be addressed within the PUD Agreement.

A sign permit is required prior to installation of any new signage.

**11. Impact Assessment.** The submittal includes an updated Impact Assessment (dated 6/1/15). In summary, the Assessment notes that the project is not anticipated to adversely impact natural features, public services/utilities, surrounding land uses or traffic. We defer to the Township Engineer as to whether a more detailed traffic impact study is needed.

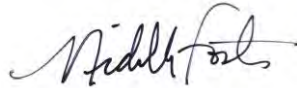
Should you have any questions concerning this matter, please do not hesitate to contact our office. We can be reached by phone at (248) 586-0505, or via e-mail at [borden@lslplanning.com](mailto:borden@lslplanning.com) and [foster@lslplanning.com](mailto:foster@lslplanning.com).

Sincerely,

**LSL PLANNING, INC.**



Brian V. Borden, AICP  
Principal Planner



Michelle Foster  
Project Planner



July 8, 2015

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

**Re: Culver's Restaurant Site Plan Review #2**

Dear Ms. Van Marter:

We have reviewed the resubmitted impact assessment and site plan documents prepared by Williams & Works for the Culver's Restaurant development dated June 25, 2015. The site is on the southwest corner of the intersection of Grand River Avenue and Latson Road. The petitioner is planning to construct a new Culver's Restaurant complete with drive-thru on the site of existing Walmart overflow parking in the Livingston Commons PUD.

We offer the following comments for consideration by the planning commission:

**SUMMARY**

1. Show existing utility easements clearly on site plan.
2. Include only the Township Standard Details to be utilized on the project. Use details to revise water service connection layout

**SITE PLAN**

1. MHOG water mains have existing 25-foot easements which must be shown on the drawings. Sanitary sewer main easements are based on depth, as noted in the Township Design Standards.
2. The petitioner shall cross out any Township standard details that are not applicable to the project. Suggest reviewing commercial water service connection detail.

The petitioner has satisfactorily addressed our primary concerns from the initial review. We recommend the above comments be addressed on the construction drawings which are required to be submitted to MHOG for review. Please call if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Gary J. Markstrom'.

Gary J. Markstrom, P.E.  
Unit Vice President

A handwritten signature in blue ink, appearing to read 'Joseph C. Siwek'.

Joseph C. Siwek, P.E.  
Project Engineer

copy: Ronald J Nelson, Metro Design & Build



# BRIGHTON AREA FIRE AUTHORITY

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

July 1, 2015

Kelly VanMarter  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

RE: Culver Restaurant  
??? E. Grand River  
Site Plan Review

Dear Kelly:

The Brighton Area Fire Department has reviewed the above mentioned site plan. The plans were received revised drawings for review on June 29, 2015 and the drawings are dated June 25, 2015. The project is based on a new 3,954 square foot A-2 occupancy use building. The plan review is based on the requirements of the International Fire Code (IFC) 2012 edition.

1. The building shall be provided with an automatic sprinkler system in accordance with NFPA 13, *Standard for the Installation of Automatic Sprinkler Systems*.  
**IFC 903**
  - A. The FDC shall be located on the South face of the building, outside of the fire sprinkler riser. This is not indicated on the plan. This will place it within 100' of the existing fire hydrant on site. **(Revised on Plans)**
2. Future project submittals shall include the address and street name of the project in the title block. **(Address not yet assigned)**  
**IFC 105.4.2**
3. The building shall include the building address on the building. The address shall be a **minimum of 6"** high letters of contrasting colors and be clearly visible from the street (Grand River). The location and size shall be verified prior to installation. **(Revised on architectural Drawings)**  
**IFC 505.1**
4. The access road into the site shall be a minimum of 26' wide. Access roads to site shall be provided and maintained during construction. Access roads shall be constructed to be capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds. **(Provided at 28' & 26' widths)**  
**IFC D 103.6**  
**IFC D 103.1**  
**IFC D 102.1**  
**IFC D 103.3**
5. Access around building shall provide emergency vehicles with an outside turning radius of up to 55' and an inside turning radius of 30'. The drive shall be provided with a minimum vertical clearance of 13 ½ feet. Provide an emergency vehicle traffic flow to indicate that emergency vehicles will be able to access around the structure and out without crossing over curbs, parking or landscaping. **(Provided on sheet C-2 & C-3)**
6. The Knox box will be located adjacent to the front door of the structure. The box location shall be approved by the fire department and installed in accordance with the manufacturer's instructions. **(Revised on architectural Drawings)**



July 1, 2015

Page 2

Culver Restaurant

??? E. Grand River

Site Plan Review

**IFC 506.1**

7. Provide names, addresses, phone numbers, emails of owner or owner's agent, contractor, architect, on-site project supervisor. **(Revised on architectural Drawings)**
8. Provide address for the project on future submittals. **(Address not yet assigned)**

Additional comments will be given during the building plan review process (specific to the building plans and occupancy). The applicant is reminded that the fire authority must review the fire protection systems submittals (sprinkler & alarm) prior to permit issuance by the Building Department and that the authority will also review the building plans for life safety requirements in conjunction with the Building Department.

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

Cordially,

A handwritten signature in black ink, appearing to read 'R. Boisvert'.

Capt. Rick Boisvert  
Fire Inspector

METRO DESIGN BUILD, INC  
20031 CARLYSLE  
DEARBORN, MI 48124  
313-563-5847 OFFICE  
313-561-5051 FAX

Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

June 1, 2015

Attn: Genoa Township  
Planning Commission

Re: Impact Statement for proposed  
Culvers Restaurant  
Grand River & Latson Road

**Name(s) & address(es) of person(s) responsible for preparation**

Metro Design and Build Inc	Architectural Concepts
20031 Carlisle	6650 Crossing Rd. S.E.
Dearborn, MI. 48124	Grand Rapids, MI. 49508
Ron Nelson	Ken Watkins

**Maps & written description/analysis of the project site**

This site is currently being used and maintained by Wal Mart and is owned by RLG Howell LLC. The site consists of a portion of the Bennigan's parking lot and the remote overflow parking spaces for Wal-Mart. The lot fronts Grand River Ave. on the North, is improved with asphalt paving, lot lighting, curbs, storm drainage, and access to the "Ring Road" on the South side. The proposed Culvers project would be utilizing 48711 SF of the existing parcel. Please refer to submitted plans for locations of existing features.

**Impact on natural features**

This project will enhance the current area by reducing paved areas with the addition of new landscaping and a new facility. All natural features were eliminated during the initial development of the site when the paving and site improvements were installed. Therefore there will be no impact on any natural features.

METRO DESIGN BUILD, INC  
20031 CARLYSLE  
DEARBORN, MI 48124  
313-563-5847 OFFICE  
313-561-5051 FAX

**Impact on storm water management**

This project will actually improve the existing storm run-off for this site by reducing the existing impervious pavement by approx. 4000 SF with new landscaping. Silt fencing will be used on the perimeter of the site during construction and filters will be placed over all existing and new storm basins. The site naturally drains to the existing regional detention system for the Livingston Commons project and meets all standards of the governing agencies.

**Impact on surrounding land used**

This project will not impact the existing surrounding land uses. It is bordered on the West side by Bob Evans and on the East by the old Bennigans building, both similar restaurant uses. There will be a drive thru associated with this project and thus an external ordering point (speaker). The sound level emitted by this unit has an adjustable range of 0 to 95 db. The unit will be located in the rear of the building and facing the ring road and will not be audible to either Bob Evans or Bennigans. This speaker will conform to the Township noise ordinance. The stocking of this building takes place outside of business hours (10 AM to 10 PM Sunday, through Wednesday and 10 AM to midnight Thursday through Saturday). The truck is able to back into the drive thru lane to access the rear door to off-load without disruption to traffic.

**Impact on public facilities & services**

A typical Culvers Restaurant has 10-12 employees per shift, and yearly guest counts of around 190,000. The peak projected guest count between noon and 1:00 PM would be approx. 100-120 guests per hour with 30% of those guests using the Drive thru and 70% using the lobby.

METRO DESIGN BUILD, INC  
20031 CARLYSLE  
DEARBORN, MI 48124  
313-563-5847 OFFICE  
313-561-5051 FAX

### **Impact on public utilities**

This development will be utilizing the existing utilities as shown on our plan submittals. We will be tapping into the existing 8" water main, the existing 8" sanitary line, and the existing 15" storm sewer utilizing the existing detention basin, which is a part of the original Wal-mart system. An average Culver's uses the following:

Water usage – average quarterly use is 248,000 gal.

Natural gas – ave. peak monthly usage is 778.47 THM

Electricity – ave. monthly usage is 25,880 KWH.

All systems that are being utilized were designed to handle usage in excess of Culver's needs.

### **Storage & handling of any hazardous materials**

There will be no hazardous materials used or stored at this facility

### **Impact on traffic & pedestrians**

This development will be accessed from the current Wal-Mart ring road and will not have any curb cuts onto Grand River Ave. Research indicates that 70% of Quick Service Restaurant (QSR) visits are impulse visits, from customers already on the existing roadways. Consequently only 30% of the visits to Culver's would be new trips for the road systems. Overall traffic volumes will be minimally impacted. Given that, the traffic levels should remain fairly consistent with current counts after the opening of the Culver's. The new infrastructure changes, including the new I-96 interchange and Latson Rd improvements will further negate any impact of traffic increases from this development. The current walk along Grand River will be maintained for pedestrian traffic during and after construction is completed. The required drive thru stacking requirement of the Township is excessive for Culver's operation. Because the small percentage of drive thru business which is 25%-30% compared to QSR average of 70%-80% the stacking shown on the plans is adequate for the intended purpose. We are requesting that this requirement be lowered for this facility to an 8 car stack with 3 waiting spaces for a total of 11 D.T. spaces.

METRO DESIGN BUILD, INC  
20031 CARLYSLE  
DEARBORN, MI 48124  
313-563-5847 OFFICE  
313-561-5051 FAX

**Special Provisions:**

The site is subject to the following (Special Provisions):

- Declaration of restrictions & easements for outlets
- Plan unit development agreement
- Plan unit development agreement for Phase II land
- Easement with covenant & restrictions affecting land ("ECR")

If you have any questions or require more info on any of the above information,  
please give me a call @ 313.563.5847

Sincerely,  
Metro Design & Build, Inc.

Ronald J. Nelson - President

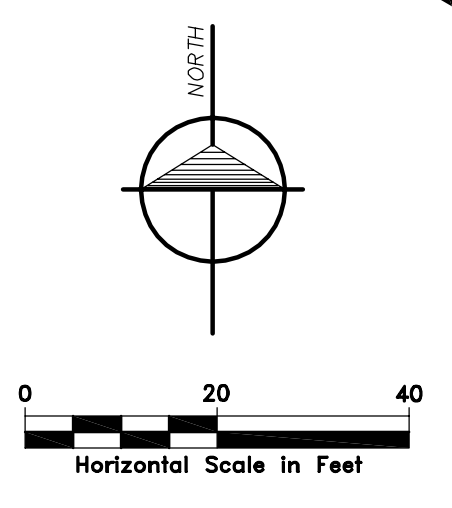
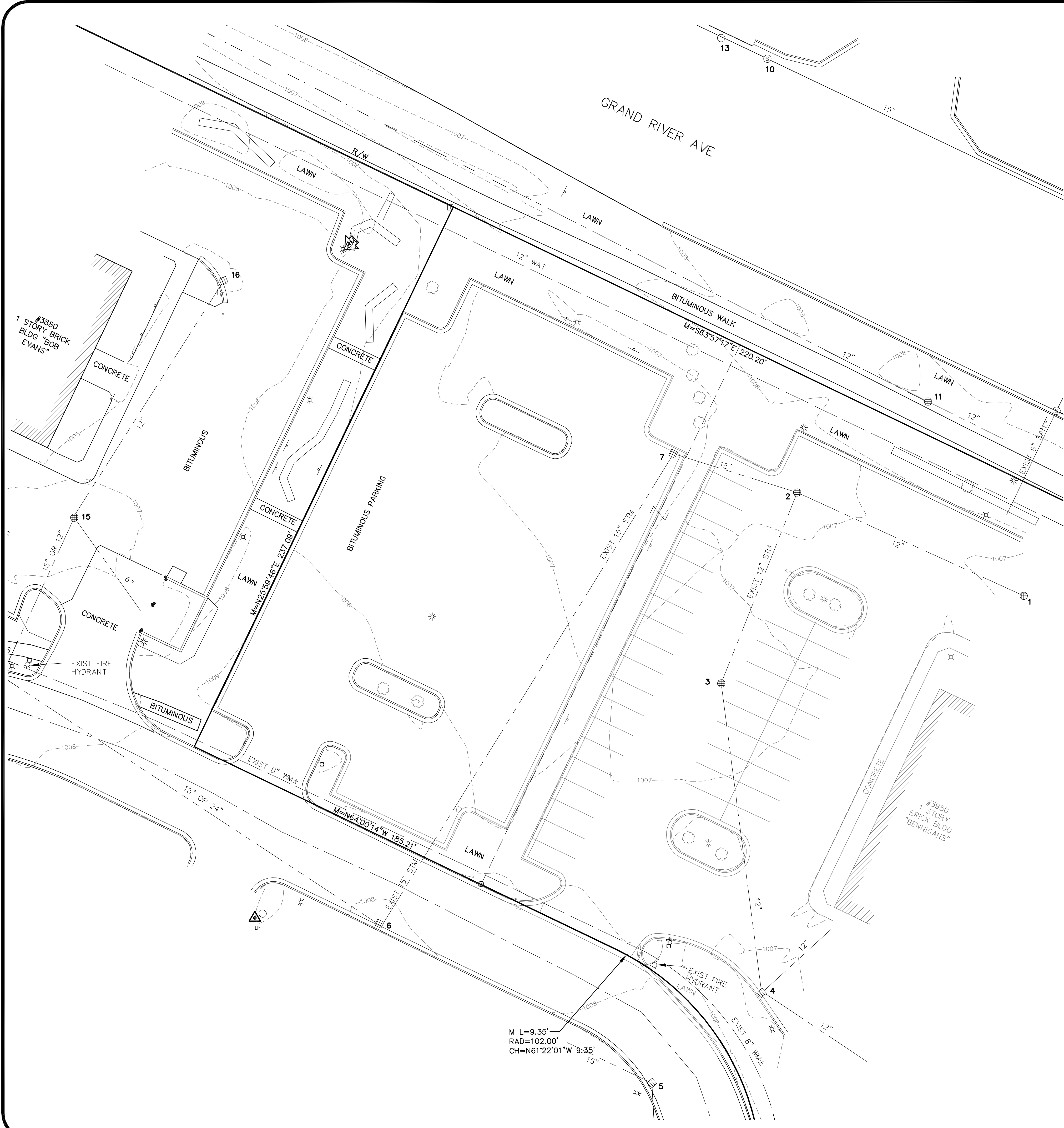






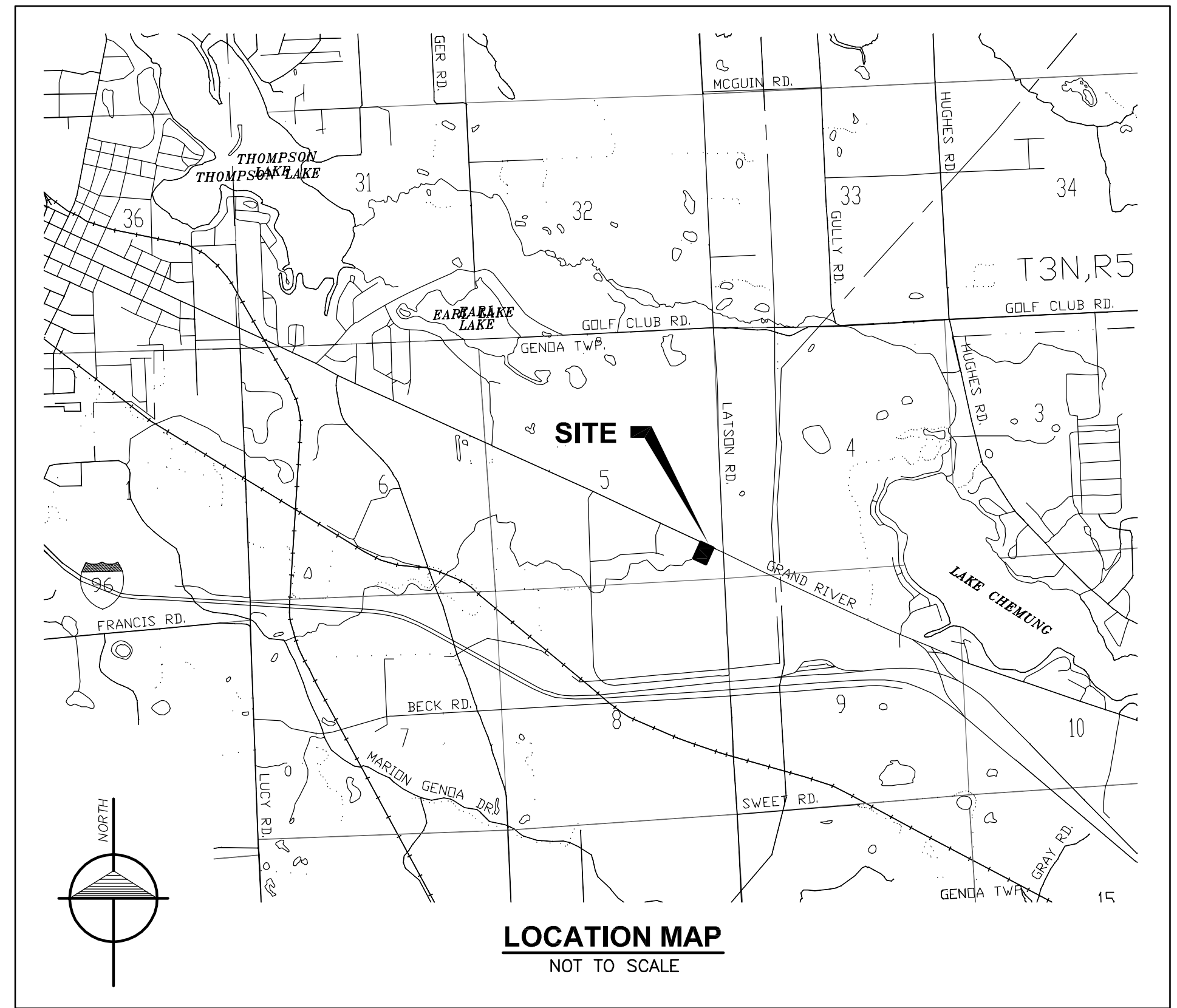
ARCHITECTURAL  
CONCEPTS

Jun 24, 2015 - 3:23pm P:\Projects\21093 CULVER'S GENOA\21093\DWG\PH-Existing.dwg, W:\E\F\211093.dwg [en] [ep] [br]



**UTILITY STRUCTURE INVERTS**

- |  |  |   |  |
|--|--|---|--|
| 1) ROUND CATCH BASIN<br>RIM=1006.61<br>12" W 1003.01                                     | 5) SQUARE CATCH BASIN<br>RIM=1007.19<br>15" W 1001.59<br>15" SE 1001.54            | 9) SANITARY MANHOLE<br>RIM=1006.96<br>8" S 1000.06<br>8" E 1000.46<br>15" W 1000.01 | 13) WATER MANHOLE?<br>RIM=1007.84<br>BOLTED SHUT   |
| 2) ROUND CATCH BASIN<br>RIM=1006.32<br>12" E 1001.82<br>12" S 1001.32<br>15" W 1001.52   | 6) SQUARE CATCH BASIN<br>RIM=1007.69<br>24" W 1001.39 15"?"<br>15" NE 1001.39      | 10) SANITARY MANHOLE<br>RIM=1007.73<br>15" E 999.48<br>15" W 999.38                 | 14) SQUARE CATCH BASIN<br>RIM=1006.94<br>24" W 1000.74<br>15" N 1000.94 12"?"<br>15" E 1000.94 24"?" |
| 3) ROUND CATCH BASIN<br>RIM=1006.22<br>12" N 1002.37<br>12" SE 1002.37                   | 7) SQUARE CATCH BASIN<br>RIM=1006.00<br>15" S 1001.70<br>15" E 1001.70             | 11) BEEHIVE CATCH BASIN<br>RIM=1008.09<br>12" E 1005.24<br>12" W 1005.24            | 15) ROUND CATCH BASIN<br>RIM=1006.34<br>12" N 1002.44<br>12" S 1002.39 15"?"<br>6" PVS TO DUMPSTER   |
| 4) SQUARE CATCH BASIN<br>RIM=1006.07<br>12" E 1002.57<br>12" NW 1002.57<br>12" N 1002.57 | 8) SANITARY MANHOLE<br>RIM=1007.65<br>8" N 1000.40<br>8" S 1000.50<br>8" E 1000.50 | 12) SANITARY MANHOLE<br>RIM=1008.22<br>15" E 998.22<br>15" W 998.02                 | 16) SQUARE CATCH BASIN<br>RIM=1006.74<br>12" S 1002.99   |



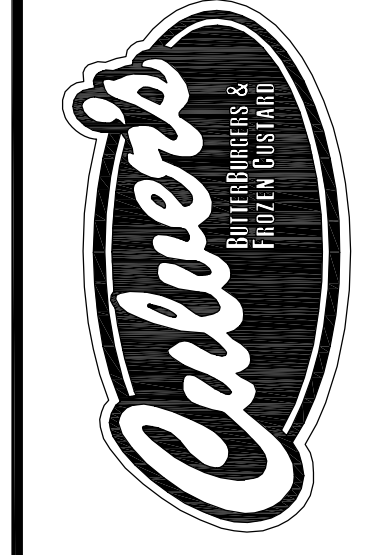
**LOCATION MAP**  
NOT TO SCALE

**EXISTING CONDITIONS PLAN**

**PRELIMINARY - NOT FOR CONSTRUCTION**  
 WARNING: These plans are for the exclusive use of Culver Franchising Systems, Inc. and authorized franchise holders only. No part of these plans or the design they represent may be duplicated or reproduced without permission of Culver Franchising System, Inc.

**Williams & Works**  
 engineers, planners, surveyors  
 616.224.1500 phone · 616.224.1501 facsimile  
 549 Ottawa Ave NW · Grand Rapids, MI 49503  
 W&W JOB#: 211093

Culver Franchising System, Inc.  
 540 Water Street  
 Prairie du Sac, WI 53788  
 608-643-7980



**CULVER'S RESTAURANT**  
**GRAND RIVER AVENUE**  
**GENOA TOWNSHIP, MI**

Date	Revision
6-25-15	REVISED PER TWP REVIEW

Sheet  
**C-0**

**PROPOSED CULVERS PARCEL**

All that part of the Southeast 1/4 of Section 5, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, described as: Commencing at the Southeast corner of Section 5; thence South 87°37'12" West 60.02 feet to the west right of way line of Latson Road (120 feet wide); thence North 0°54'40" West 485.68 feet along said west right of way line to the southwesterly right of way line of Grand River Avenue (variable width), thence North 20°31'52" West 21.17 feet along said southwesterly right of way line; thence North 63°57'17" West 139.30 feet along said southwesterly right of way line to THE PLACE OF BEGINNING OF THIS DESCRIPTION; thence South 25°59'46" West 69.21 feet; thence North 63°52'56" West 18.89 feet; thence South 26°07'04" West 111.80 feet; thence South 52°09'47" West 15.01 feet; thence South 25°52'33" West 42.88 feet; thence northwesterly 9.35 feet along a 102.00 radius non-tangent curve to the left, the chord of which bears North 61°22'01" West 9.35 feet; thence North 64°00'14" West 185.21 feet; thence North 25°59'46" East 237.09 feet to the southwesterly right of way line of Grand River Avenue; thence South 63°57'17" East 220.20 feet along said southwesterly right of way line to the place of beginning.

Subject to all easements and restrictions of record.

**PROPOSED RESIDUAL PARCEL**

All that part of the Southeast 1/4 of Section 5, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, described as: Commencing at the Southeast corner of Section 5; thence South 87°37'12" West 60.02 feet to the west right of way line of Latson Road (120 feet wide); thence North 0°54'40" West 485.68 feet along said west right of way line to the southwesterly right of way line of Grand River Avenue (variable width), thence North 20°31'52" West 21.17 feet along said southwesterly right of way line; thence North 63°57'17" West 139.30 feet along said southwesterly right of way line to THE PLACE OF BEGINNING OF THIS DESCRIPTION; thence South 25°59'46" West 69.21 feet; thence North 63°52'56" West 18.89 feet; thence South 26°07'04" West 111.80 feet; thence South 52°09'47" West 15.01 feet; thence South 25°52'33" West 42.88 feet; thence northwesterly 9.35 feet along a 102.00 radius non-tangent curve to the left, the chord of which bears North 61°22'01" West 9.35 feet; thence North 64°00'14" West 185.21 feet; thence North 25°59'46" East 237.09 feet to the southwesterly right of way line of Grand River Avenue; thence South 63°57'17" East 220.20 feet along said southwesterly right of way line to the place of beginning.

Subject to all easements and restrictions of record.

**GENERAL NOTES:**

SITE AREA = 48,711 Sq. Ft.

ZONING: NRPUD

BUILDING AREA: 3,954 Sq. Ft.

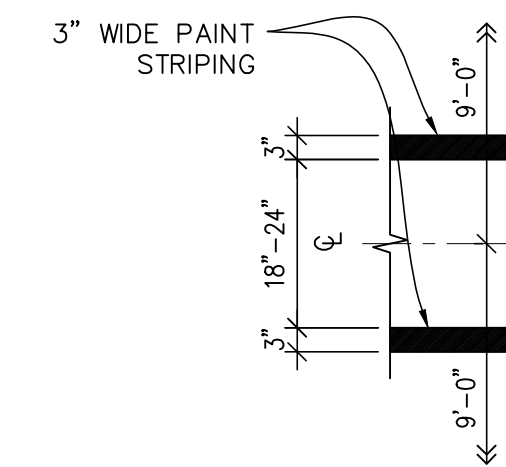
PERCENTAGE OF LAND COVERED BY PROPOSED IMPERVIOUS SURFACES BUILDING + PAVEMENT = 3,954 + 32,178 = 75%

PARKING REQUIREMENTS : DRIVE-THROUGH RESTAURANT  
1 SPACE PER 70 SQ. FT. GROSS LEASABLE FLOOR AREA OR 0.5 SPACES PER SEAT, WHICHEVER IS GREATER, PLUS 3 DESIGNATED DRIVE-THROUGH SHORT TERM WAITING SPACES, PLUS 10 STACKING SPACES FOR DRIVE THROUGH SERVICE WHICH DO NOT CONFLICT WITH USE OF REQUIRED SPACES, PLUS AT LEAST 2 LONGER SPACES DESIGNATED FOR RECREATIONAL VEHICLES AND SEMI-TRUCKS

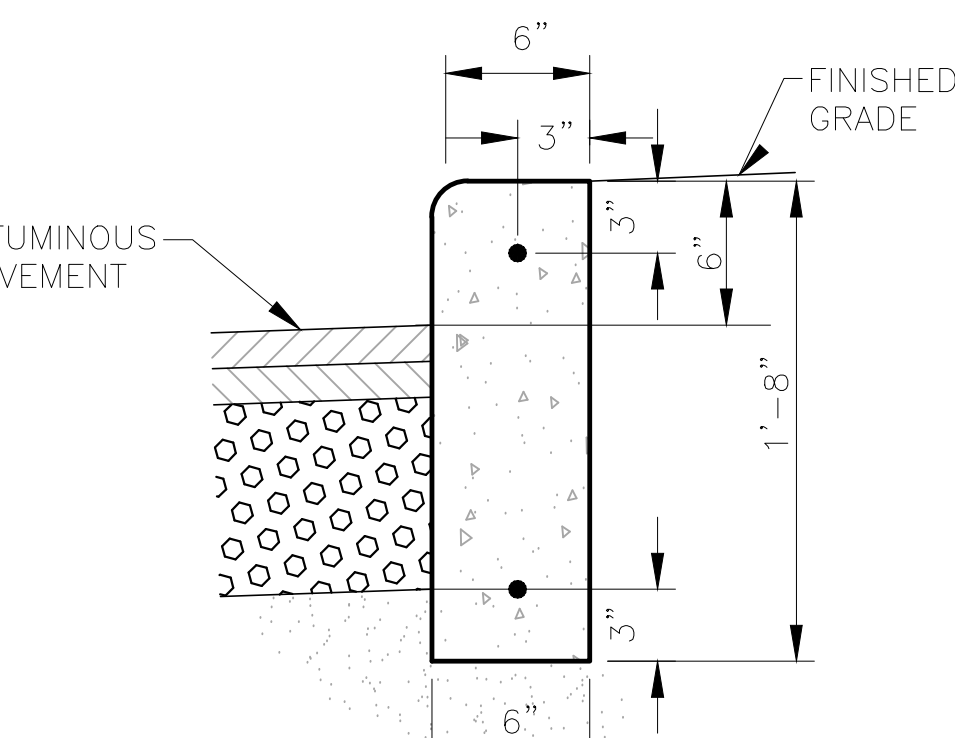
85 SEATS x .5 = 43 SPACES REQUIRED

PARKING SHOWN: 60 SPACES

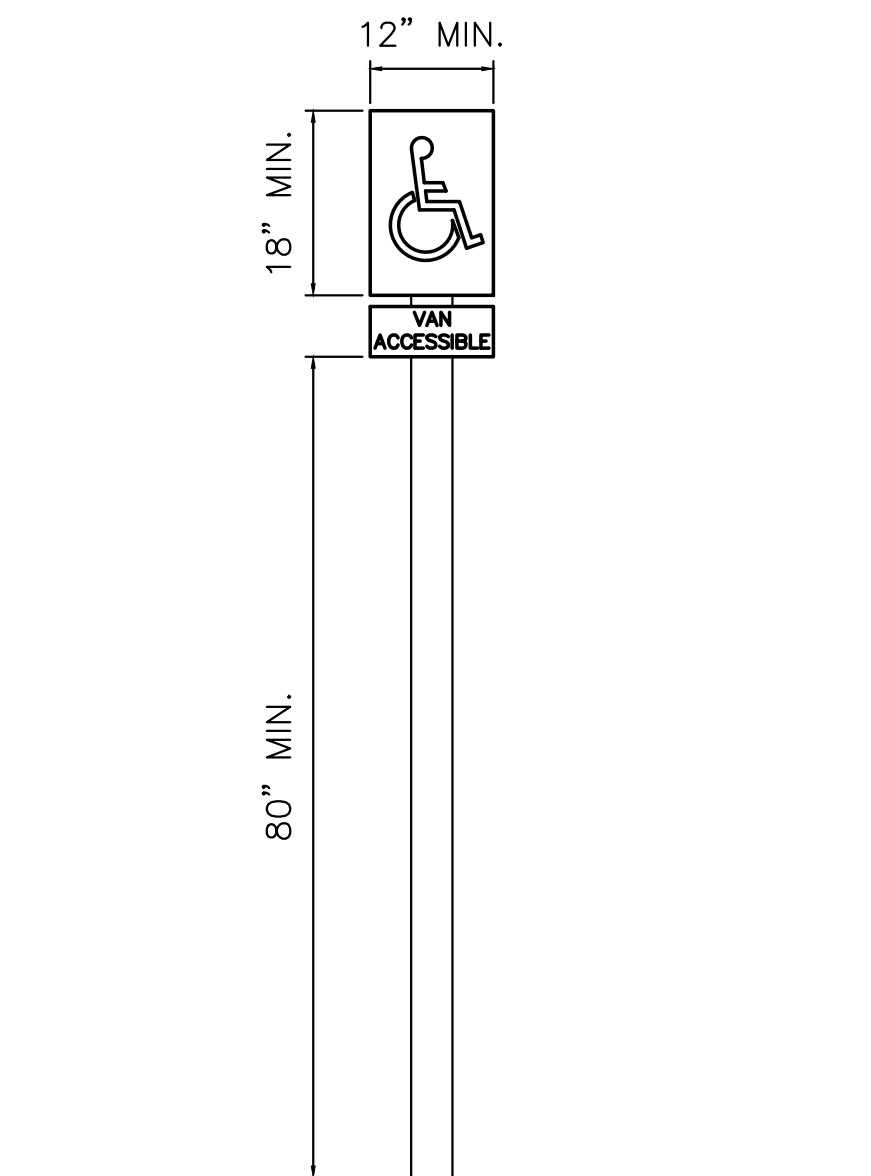
PARKING SIZE:  
9'-0" x 18'-0" WITH 24'-0" AISLE  
H.C. 9'-0" x 18'-0" WITH 9'-0" AISLE



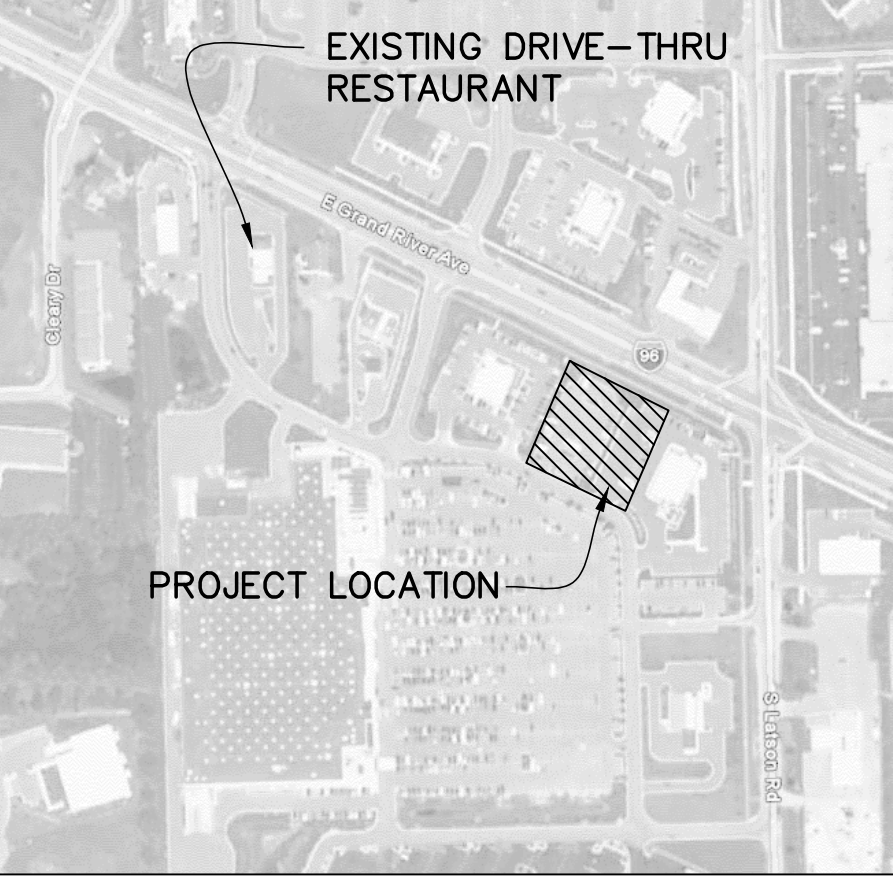
5 PARKING SPACE STRIPING DETAIL  
C-1 NO SCALE



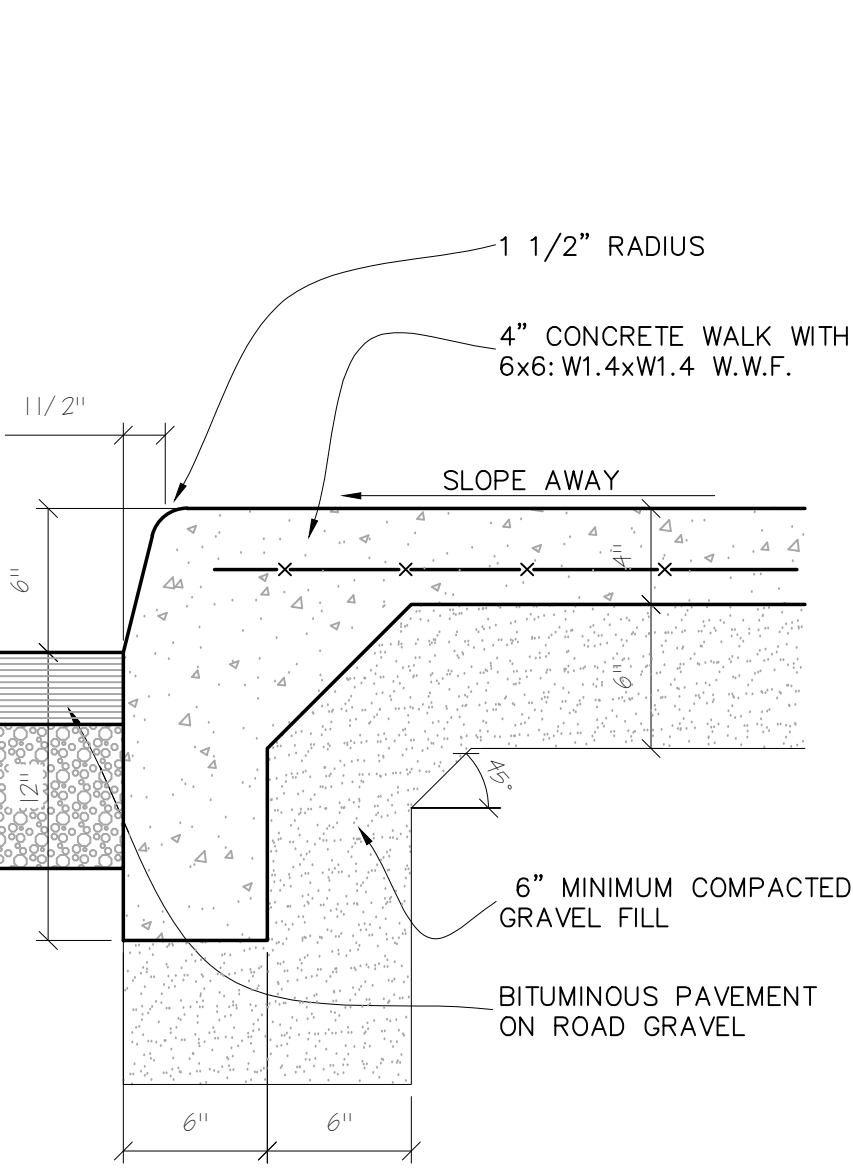
4 TYPICAL STRAIGHT CURB DETAIL  
C-1 NO SCALE



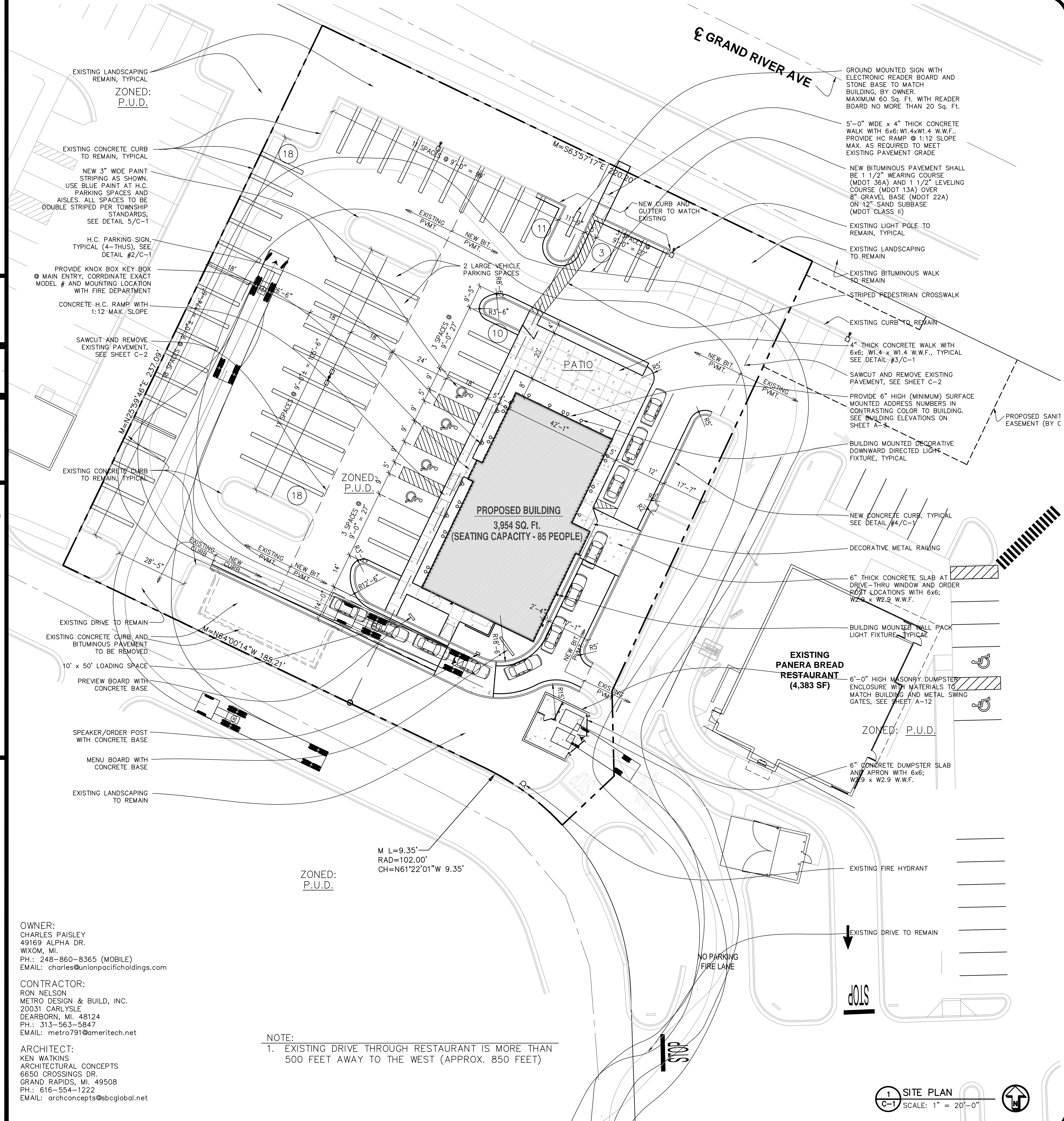
2 TYPICAL H.C. PARKING SIGN DETAIL  
C-1 NO SCALE



LOCATION MAP  
NO SCALE



3 TYPICAL WALK/CURB DETAIL  
C-1 SCALE: 1 1/2" = 1'-0"



OWNER:  
CHARLES PAISLEY  
49169 ALPHA DR.  
WIXOM, MI  
PH: 248-860-8365 (MOBILE)  
EMAIL: charles@unionpacificholdings.com

CONTRACTOR:  
RON NELSON  
METRO DESIGN & BUILD, INC.  
20031 CARLYSLE  
DEARBORN, MI 48124  
PH: 313-563-5847  
EMAIL: metro791@ameritech.net

ARCHITECT:  
KEN WATKINS  
ARCHITECTURAL CONCEPTS  
6650 CROSSINGS DR.  
GRAND RAPIDS, MI 49508  
PH: 616-554-1222  
EMAIL: archconcepts@sbcglobal.net

NOTE:  
1. EXISTING DRIVE THROUGH RESTAURANT IS MORE THAN 500 FEET AWAY TO THE WEST (APPROX. 850 FEET)

GROUND MOUNTED SIGN WITH ELECTRONIC READER BOARD AND STONE BASE TO MATCH BUILDING, BY OWNER. MAXIMUM 60 SQ. FT. WITH READER BOARD NO MORE THAN 20 SQ. FT.

5'-0" WIDE x 4" THICK CONCRETE WALK WITH 6x6: W1.4xW1.4 W.W.F.. PROVIDE HC RAMP @ 1:12 SLOPE MAX. AS REQUIRED TO MEET EXISTING PAVEMENT GRADE

NEW BITUMINOUS PAVEMENT SHALL BE 1 1/2" WEARING COURSE (MDO 36A) AND 1 1/2" LEVELING COURSE (MDO 13A) OVER 8" GRAVEL BASE (MDO 22A) ON 12" SAND SUBBASE (MDO CLASS II)

EXISTING LIGHT POLE TO REMAIN, TYPICAL

EXISTING LANDSCAPING TO REMAIN

EXISTING BITUMINOUS WALK TO REMAIN

STRIPED PEDESTRIAN CROSSWALK

EXISTING CURB TO REMAIN

4" THICK CONCRETE WALK WITH 6x6: W1.4 x W1.4 W.W.F., TYPICAL SEE DETAIL #3/C-1

SAWCUT AND REMOVE EXISTING PAVEMENT, SEE SHEET C-2

PROVIDE 6" HIGH (MINIMUM) SURFACE MOUNTED ADDRESS NUMBERS IN CONTRASTING COLOR TO BUILDING. SEE BUILDING ELEVATIONS ON SHEET A-5

BUILDING MOUNTED DECORATIVE DOWNWARD DIRECTED LIGHT FIXTURE, TYPICAL

NEW CONCRETE CURB, TYPICAL SEE DETAIL #4/C-1

DECORATIVE METAL RAILING

6" THICK CONCRETE SLAB AT DRIVE-THRU WINDOW AND ORDER POST LOCATIONS WITH 6x6: W2.9 x W2.9 W.W.F.

BUILDING MOUNTED WALL PACK LIGHT FIXTURE, TYPICAL

EXISTING PANERA BREAD RESTAURANT (4,383 SF)

6'-0" HIGH MASONRY DUMPSTER ENCLOSURE WITH MATERIALS TO MATCH BUILDING AND METAL SWING GATES, SEE SHEET A-12

ZONED: P.U.D.

6" CONCRETE DUMPSTER SLAB AND APRON WITH 6x6: W2.9 x W2.9 W.W.F.

EXISTING FIRE HYDRANT

EXISTING DRIVE TO REMAIN

STOP

NO PARKING FIRE LANE

STOP

STOP

STOP

STOP

STOP

STOP

STOP

STOP

STOP

STOP

STOP

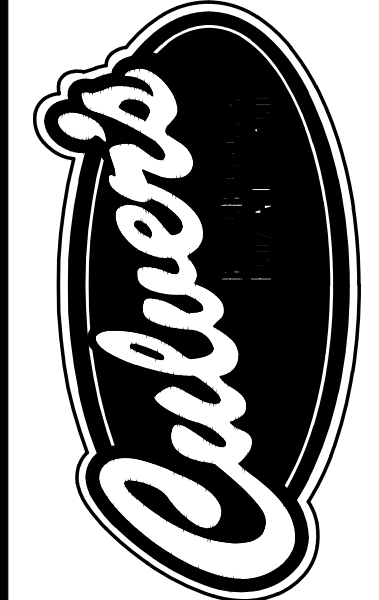
1 SITE PLAN  
C-1 SCALE: 1" = 20'-0"

PRELIMINARY NO FOR CONSTRUCTION

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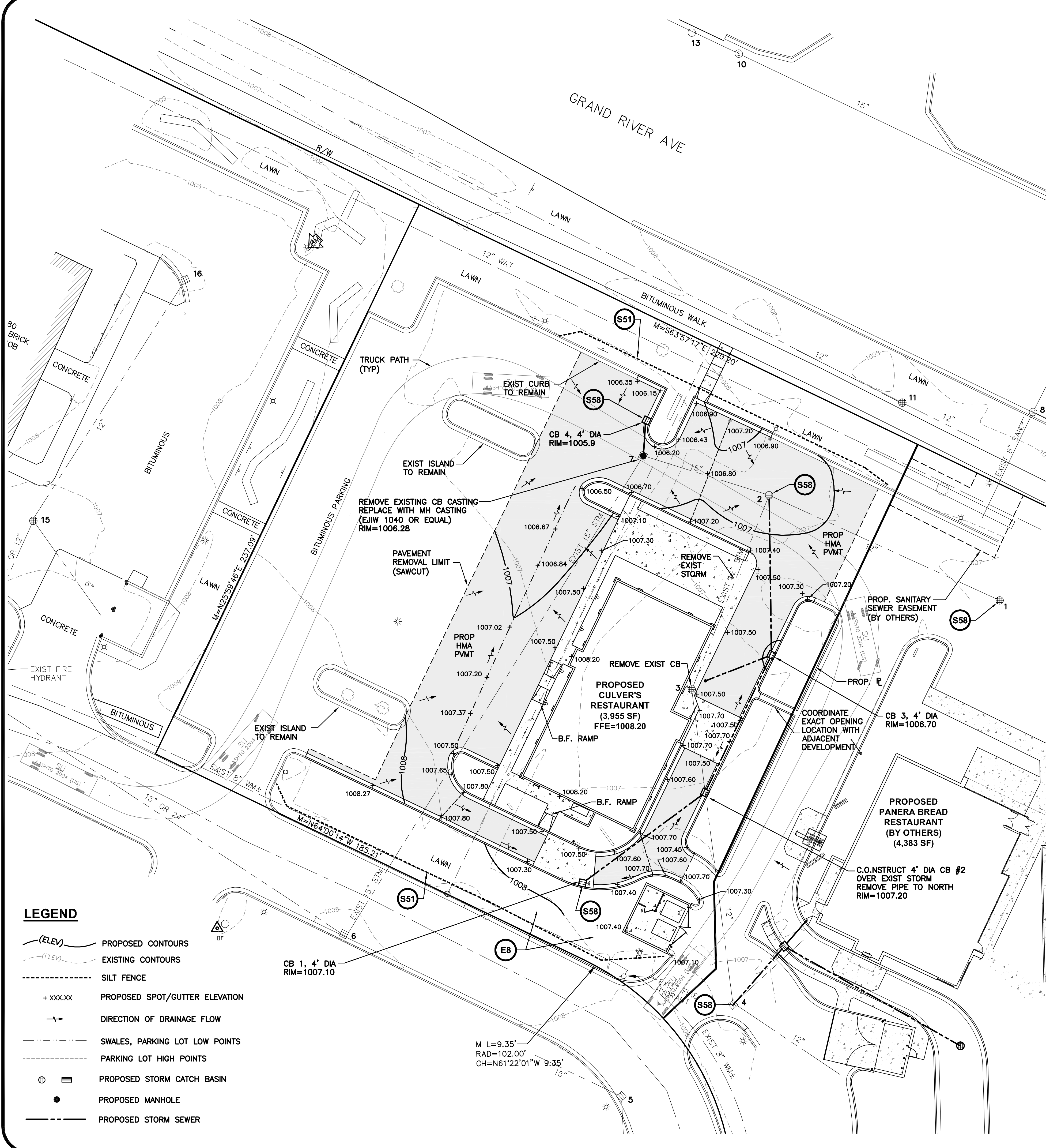
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Prairie du Sac, WI 53578  
608-643-7980



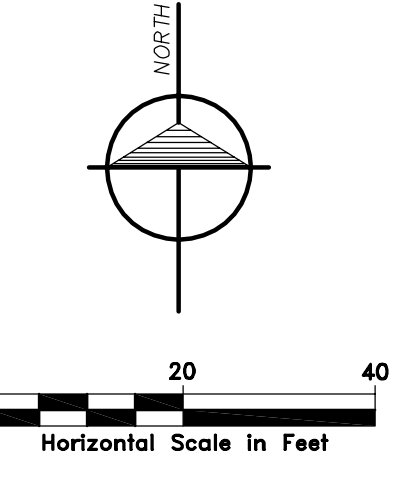
CULVER'S RESTAURANT  
GRAND RIVER AVENUE  
GENOA TOWNSHIP, MI

Revision	Date	Description
06-01-2015	06-25-2015	FOR SITE PLAN APPROVAL REVISED PER TWP REVIEW

Sheet  
**C-1**



3 WORKING DAYS  
BEFORE YOU DIG  
CALL MISS DIG  
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**UTILITY STRUCTURE INVERTS**

- |  |  |   |  |
|--|--|---|--|
| 1) ROUND CATCH BASIN<br>RIM=1006.61<br>12" W 1003.01                                     | 5) SQUARE CATCH BASIN<br>RIM=1007.19<br>15" W 1001.59<br>15" SE 1001.54            | 9) SANITARY MANHOLE<br>RIM=1006.96<br>8" S 1000.06<br>8" E 1000.46<br>15" W 1000.01 | 13) WATER MANHOLE?<br>RIM=1007.84<br>BOLTED SHUT   |
| 2) ROUND CATCH BASIN<br>RIM=1006.32<br>12" E 1001.82<br>12" S 1001.32<br>15" W 1001.52   | 6) SQUARE CATCH BASIN<br>RIM=1007.69<br>24" W 1001.39 15"?<br>15" NE 1001.39       | 10) SANITARY MANHOLE<br>RIM=1007.73<br>15" E 999.48<br>15" W 999.38                 | 14) SQUARE CATCH BASIN<br>RIM=1006.94<br>24" W 1000.74<br>15" N 1000.94 12"?<br>15" E 1000.94 24"? |
| 3) ROUND CATCH BASIN<br>RIM=1006.22<br>12" N 1002.37<br>12" SE 1002.37                   | 7) SQUARE CATCH BASIN<br>RIM=1006.00<br>15" S 1001.70<br>15" E 1001.70             | 11) BEEHIVE CATCH BASIN<br>RIM=1008.09<br>12" E 1005.24<br>12" W 1005.24            | 15) ROUND CATCH BASIN<br>RIM=1006.34<br>12" N 1002.44<br>12" S 1002.39 15"?<br>6" PVS TO DUMPSTER  |
| 4) SQUARE CATCH BASIN<br>RIM=1006.07<br>12" E 1002.57<br>12" NW 1002.57<br>12" N 1002.57 | 8) SANITARY MANHOLE<br>RIM=1007.65<br>8" N 1000.40<br>8" S 1000.50<br>8" E 1000.50 | 12) SANITARY MANHOLE<br>RIM=1008.22<br>15" E 998.22<br>15" W 998.02                 | 16) SQUARE CATCH BASIN<br>RIM=1006.74<br>12" S 1002.99   |

**SOIL EROSION NOTES**

- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY, LIVINGSTON COUNTY & GENOA TOWNSHIP REQUIREMENTS.
- GRADING WILL BE LIMITED TO THE AREAS AS INDICATED ON THIS SHEET.
- CONTRACTOR SHALL BE REQUIRED TO PROVIDE CLEAN-UP OPERATIONS ALONG & ON THE ROADWAY AND ADJACENT PARKING AREAS WHERE DIRT AND/OR DEBRIS HAS BEEN DEPOSITED DUE TO CONSTRUCTION ACTIVITIES AND/OR RELATED WORK. AS A MINIMUM, CLEANUP WILL BE DONE ON A DAILY BASIS; ADDITIONAL CLEANUP WILL BE PERFORMED AS DEEMED NECESSARY BY THE LIVINGSTON COUNTY AND/OR GENOA TOWNSHIP PERSONNEL.
- ALL DISTURBED AREAS TO BE SODDED OR SEEDING WITH PERMANENT SEED MIXTURE WITHIN 5 CALENDAR DAYS OF ACHIEVING FINAL GRADE.
- ALL SLOPES GREATER THAN 4:1 SHALL BE STABILIZED WITH NORTH AMERICAN GREEN DS-150 EROSION CONTROL BLANKET OR APPROVED EQUAL, UNLESS NOTED OTHERWISE. BLANKETS TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
- TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES TO BE CHECKED DAILY AND ANY PROBLEMS REMEDIATED IMMEDIATELY.
- PERMANENT EROSION CONTROL MEASURES TO BE MAINTAINED BY PROPERTY OWNER. MAINTENANCE INCLUDES REGULAR INSPECTION, ENSURING VEGETATION IS ADEQUATE ON ALL SLOPES, AND COMPLETING NECESSARY MAINTENANCE ON THE STORM SYSTEM.

**SESC SCHEDULE**

- INSTALL FILTER SOCK & INLET PROTECTION AS SHOWN. MAINTAIN SILT FILTER SOCK AND INLET PROTECTION BY REMOVING SEDIMENT WHEN IT HAS REACHED 1/3 TO 1/2 OF THEIR HEIGHT.
- PERMANENT CONTROL MEASURES MUST BE COMPLETED 5 CALENDAR DAYS AFTER THE FINAL EARTH CHANGE IS COMPLETED FOR EACH AREA DISTURBED. THIS INCLUDES BLANKETS, SEEDING, MULCHING & HYDROMULCHING, AS INDICATED IN THESE PLANS.
- FOR ANY AREAS TO BE SEEDING, THE MULCH MUST BE APPLIED IMMEDIATELY AFTER SEED APPLICATION.
- REMOVE TEMPORARY CONTROLS SUCH AS SILT FENCE, INLET PROTECTION AND NETTING ONCE VEGETATION IS ESTABLISHED AND THE SITE HAS BEEN STABILIZED.

**GENERAL NOTES**

- EXISTING UTILITIES SHOWN ARE FROM RECORD PLANS AND EVIDENCE IN THE FIELD. NO GUARANTEE IS MADE FOR ACCURACY OR THAT THE UTILITIES SHOWN ARE THE ONLY IN THE AREA.
- EXISTING SITE CONSISTS OF PAVED PARKING AREAS. THE LIVINGSTON COUNTY SOIL SURVEY INDICATES UNDERLYING SOILS TO CONSIST OF CONOVER LOAM AND MIAMI LOAM.
- EXISTING IMPERVIOUS SURFACE AREA (WITHIN PROPOSED PROPERTY) = 38,533 S.F.  
PROPOSED IMPERVIOUS AREA (WITHIN PROPOSED PROPERTY) = 36,132 S.F.  
PROPOSED SITE IMPROVEMENTS RESULT IN A NET DECREASE OF IMPERVIOUS SURFACE.
- ALL CONSTRUCTION METHODS & MATERIALS SHALL COMPLY WITH GENOA TOWNSHIP REQUIREMENTS AND SPECIFICATIONS.
- ALL CONSTRUCTION ACTIVITIES SHALL BE STAKED AND GRADED UNDER THE SUPERVISION OF A LICENSED LAND SURVEYOR.
- ALL RUNOFF FROM PROPOSED BUILDING ROOF SHALL BE CONNECTED TO THE PROPOSED STORM SEWER AS INDICATED.
- STORM SEWER PIPE TO BE SLOPP HANCOR MEGA GREEN ST-18 (OR APPROVED EQUAL) UNLESS OTHERWISE SPECIFIED.
- CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTIONS WITH THE APPROPRIATE UTILITY PROVIDERS PRIOR TO BEGINNING CONSTRUCTION.
- STORMWATER WILL BE COLLECTED IN A COLLECTION SYSTEM AND WILL DISCHARGE THROUGH THE EXISTING SITE OUTLET TO THE PRIVATE DRIVE ALONG THE SOUTH PROPERTY LINE.
- A QUALIFIED GEOTECHNICAL ENGINEER SHALL BE CONTRACTED TO MONITOR EARTHWORK & PAVING ACTIVITIES.
- GREASE INTERCEPTOR TO BE 1000 GALLON, HEAVY DUTY, THREE COMPARTMENT TANK. TANK OPENINGS SHALL BE H20 RATED AND SHALL BE GAS TIGHT. A ZABEL A300-8 SERIES EFFLUENT FILTER SHALL BE PLACED ON OUTLET PIPE.
- CONTRACTOR SHALL MAINTAIN CERTIFICATION OF ALL MATERIALS USED ON THE PROJECT. COPIES OF THE CERTIFICATION SHALL BE AVAILABLE UPON REQUEST.
- WHERE UNSUITABLE MATERIAL IS ENCOUNTERED, IT SHALL BE UNDERCUT TO SUITABLE MATERIALS. BACKFILL SHALL MEET GRANULAR MATERIAL CLASS II REQUIREMENTS.

**LEGEND**

- (ELEV) PROPOSED CONTOURS
- (ELEV) EXISTING CONTOURS
- SILT FENCE
- + xxx.xx PROPOSED SPOT/GUTTER ELEVATION
- DIRECTION OF DRAINAGE FLOW
- SWALES, PARKING LOT LOW POINTS
- PARKING LOT HIGH POINTS
- ⊕ PROPOSED STORM CATCH BASIN
- PROPOSED MANHOLE
- PROPOSED STORM SEWER

**MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET  
S-E-S-C KEYING SYSTEM**

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
<b>EROSION / SEDIMENT CONTROLS</b>			
E8	PERMANENT SEEDING		Stabilization method utilized on sites where earth change has been completed (final grading attained).
S51	SILT FENCE		Use adjacent to critical areas, to prevent sediment laden sheet flow from entering these areas.
S58	INLET PROTECTION FABRIC DROP		Use at stormwater inlets, especially at construction sites.

**SITE GRADING & EROSION CONTROL PLAN**

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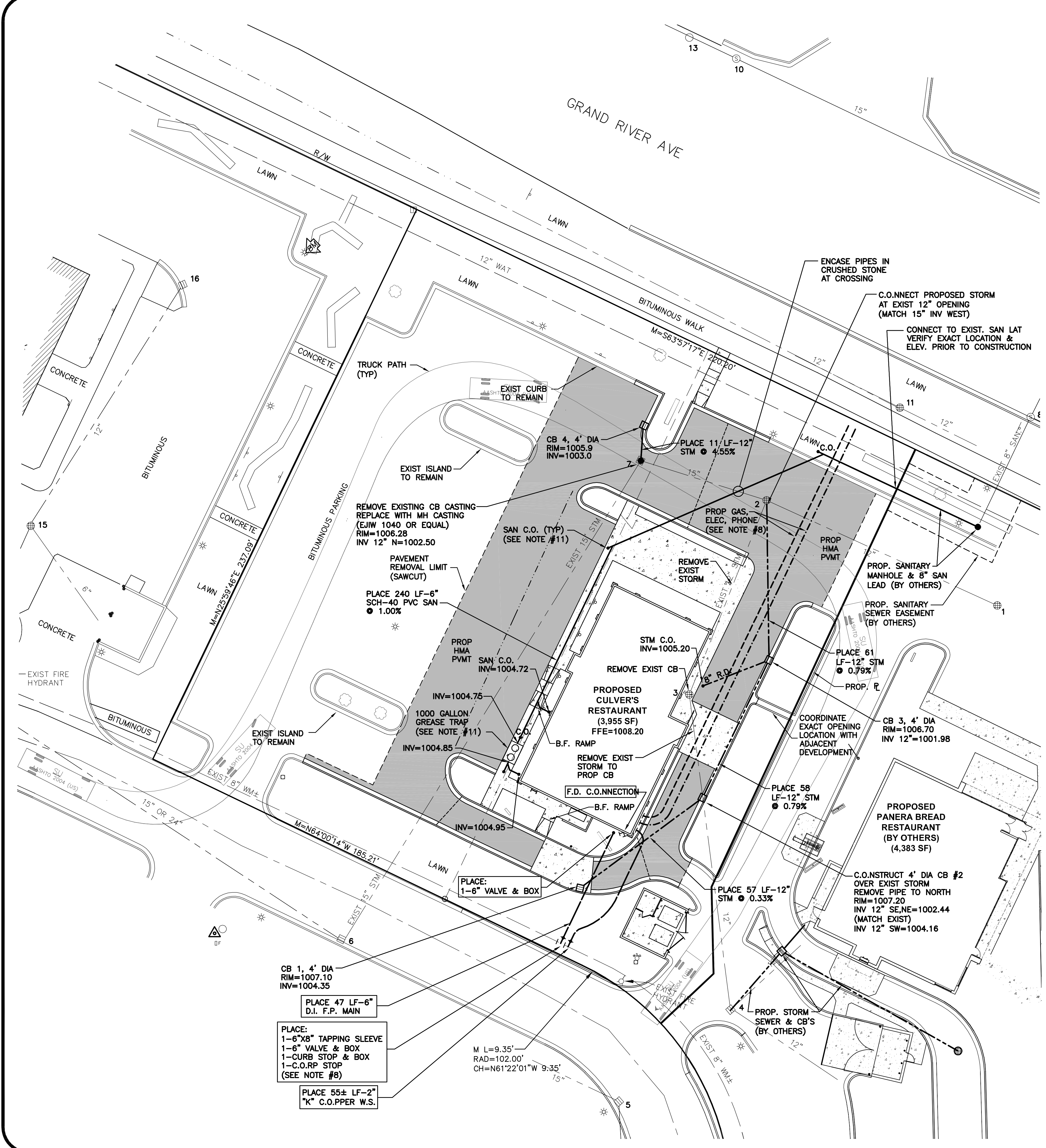
**CULVER'S RESTAURANT**  
**GRAND RIVER AVENUE**  
**GENOA TOWNSHIP, MI**

Date	Revision	REVISOR	TWP REVIEW
6-25-15			

**Williams & Works**  
engineers, planners, surveyors  
616.224.1500 phone · 616.224.1501 facsimile  
549 Ottawa Ave NW · Grand Rapids, MI 49503  
W&W JOB#: 211093

Culver Franchising System, Inc.  
540 Water Street  
Prairie du Sac, WI 53578  
608-643-7980

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**CULVER'S RESTAURANT**  
**GRAND RIVER AVENUE**  
**GENOA TOWNSHIP, MI**

**Williams & Works**  
 engineers, planners, surveyors  
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 549 Ottawa Ave NW · Grand Rapids, MI 49503  
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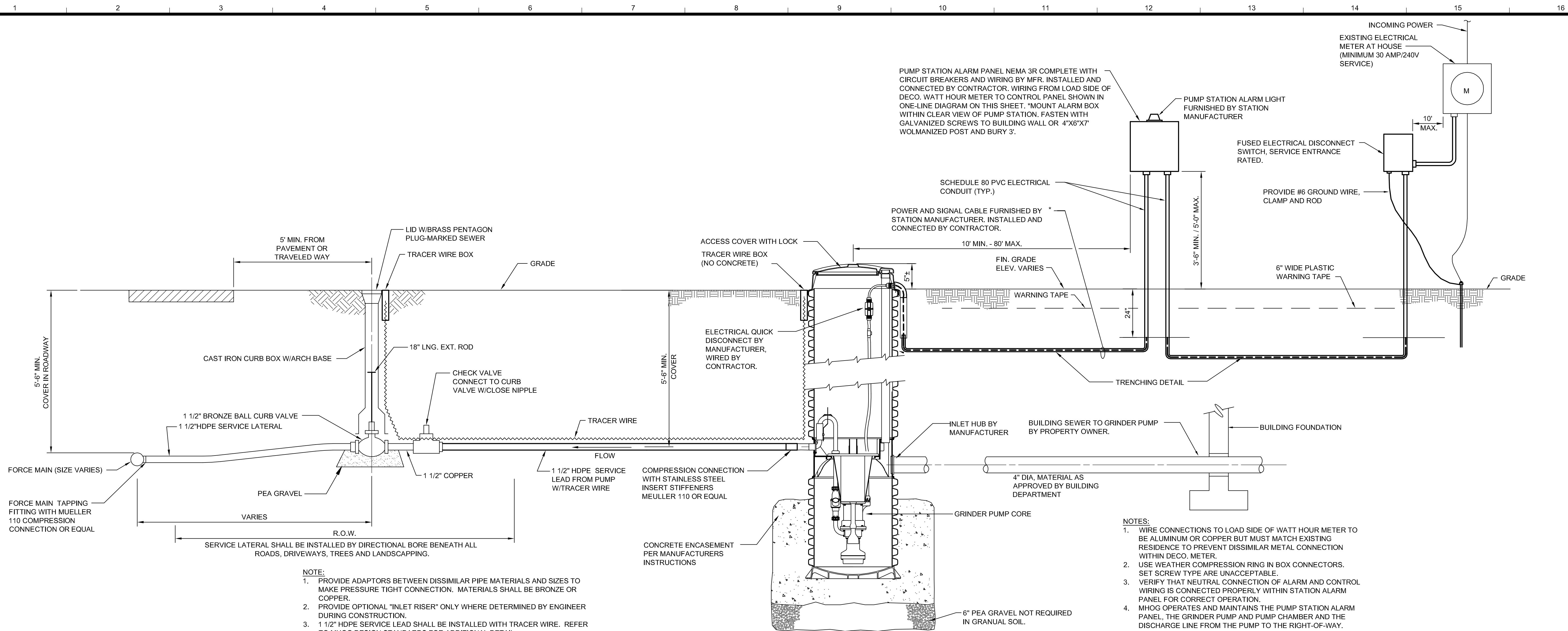
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 Franchising System, Inc.  
 540 Water Street  
 Prairie du Sac, WI 53786  
 608-643-7980

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**DATE** 6-25-15  
**REVISION** REVISED PER TWP REVIEW

**Sheet**  
**C-3**

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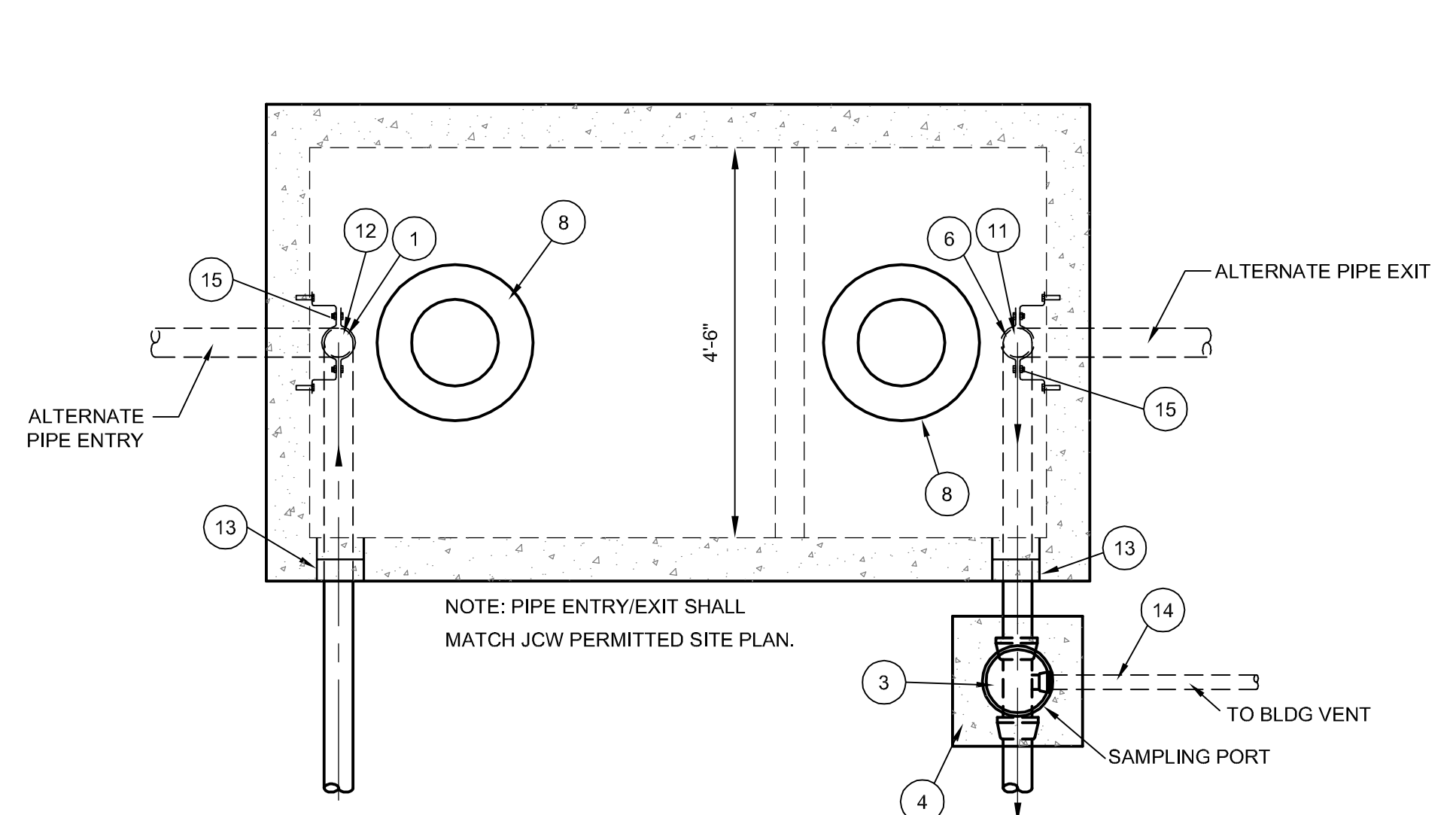


**SIMPLEX/DUPLEX GRINDER PUMPING STATION**

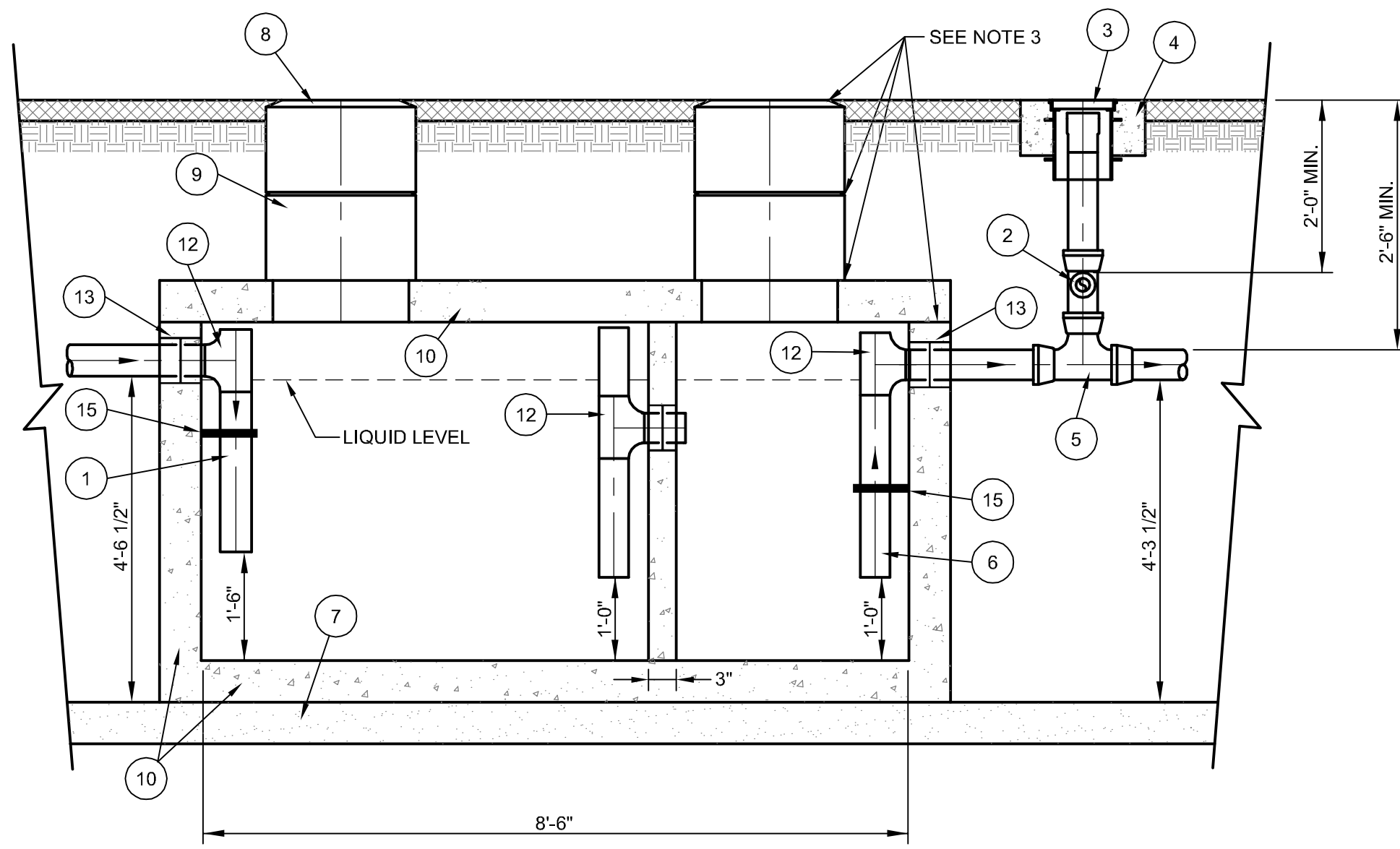
NO SCALE

- NOTE:
1. PROVIDE ADAPTORS BETWEEN DISSIMILAR PIPE MATERIALS AND SIZES TO MAKE PRESSURE TIGHT CONNECTION. MATERIALS SHALL BE BRONZE OR COPPER.
  2. PROVIDE OPTIONAL "INLET RISER" ONLY WHERE DETERMINED BY ENGINEER DURING CONSTRUCTION.
  3. 1 1/2" HDPE SERVICE LEAD SHALL BE INSTALLED WITH TRACER WIRE. REFER TO MHOG DESIGN STANDARDS FOR ADDITIONAL DETAIL.

- NOTES:
1. WIRE CONNECTIONS TO LOAD SIDE OF WATT HOUR METER TO BE ALUMINUM OR COPPER BUT MUST MATCH EXISTING RESIDENCE TO PREVENT DISSIMILAR METAL CONNECTION WITHIN DECO. METER.
  2. USE WEATHER COMPRESSION RING IN BOX CONNECTORS. SET SCREW TYPE ARE UNACCEPTABLE.
  3. VERIFY THAT NEUTRAL CONNECTION OF ALARM AND CONTROL WIRING IS CONNECTED PROPERLY WITHIN STATION ALARM PANEL FOR CORRECT OPERATION.
  4. MHOG OPERATES AND MAINTAINS THE PUMP STATION ALARM PANEL, THE GRINDER PUMP AND PUMP CHAMBER AND THE DISCHARGE LINE FROM THE PUMP TO THE RIGHT-OF-WAY. THE LOCATION OF THE GRINDER PUMP MUST BE APPROVED BY MHOG PRIOR TO INSTALLATION. THE GRINDER PUMP MUST BE SERVICEABLE (ACCESSIBLE BY TRUCK) AND FREE FROM OBSTRUCTION.
  5. MHOG MUST BE ONSITE FOR STARTUP OF ALL NEW GRINDER PUMPS.



NOTE: PIPE ENTRY/EXIT SHALL MATCH JCW PERMITTED SITE PLAN.



ITEM	DESCRIPTION
1	4" PVC INLET PIPE*
2	4"x4"x2" TEE WITH 2" PIPE TO BUILDING VENT*
3	THREADED C/O CAP JOSAM 58860 OR APP EQUAL**
4	CONCRETE PAD
5	4"x4"x4" TWO-WAY CLEANOUT TEE*
6	4" PVC OUTLET*
7	4" - 6" GRAVEL BEDDING
8	HEAVY-DUTY CAST IRON FRAME AND COVER ***
9	CONCRETE ADJUSTMENT RINGS
10	REINFORCE AS REQUIRED FOR SERVICE CONDITIONS
11	4" PVC 90° ELBOW*
12	4" PVC TEE*
13	A-LOK OR PRESS SEAL PSX PIPE/WALL CONNECTOR
14	2" VENT PIPE (IDENTIFY PIPE TYPE, CLASS & JOINT AS REQUIRED FOR PROJECT)
15	STAINLESS STEEL PIPE SUPPORT CLAMP ****

\* 6" PIPE MAY BE SUBSTITUTED TO MATCH UPSTREAM PIPE DIAMETER.  
 \*\* REFER TO CLEAN OUT DETAIL(S) ON STANDARD DETAIL SHEET.  
 \*\*\* CLAY & BAILEY 2008 BV OR EQUAL (FROST PROOF COVERS OPTIONAL)  
 \*\*\*\* FM STAINLESS FASTNERS #63 OR EQUAL, 1/2"x2-1/2" SS BRACKET W/ 1/2"x1-1/2" FULLY THREADED SS HEX BOLT WITH 1/2" SS WASHER AND 1/2"x1-3/4" SS ANCHORS. CLAMP TO BE FACTORY INSTALLED.

- NOTES:
1. THREE COVERS AND RISERS SHOWN. TWO COVERS AND RISERS CENTERED OVER UPPER TWO BAFFLES ARE OPTIONAL.
  2. INTERCEPTOR SIZE - 1000 GAL MINIMUM (REVISE THE SIZE DIMENSIONS, AS NEEDED, FOR LARGER CAPACITY INTERCEPTORS)
  3. ALL JOINTS AT THE FRAME & COVER\*, CONCRETE ADJUSTMENT RINGS AND THE LID OF THE INTERCEPTOR SHALL BE SEALED WITH A MINIMUM OF TWO (2) ROWS OF 3/4 TO 1 INCH PREFORMED BUTYL JOINT SEALER AND A 6" BUTYL JOINT WRAP AROUND SLEEVE (EZ WRAP). THE ENDS OF THE 6" EZ WRAP SHALL OVERLAP BY 12".
  4. PIPING ON THE INTERIOR OF THE INTERCEPTOR SHALL BE PVC WITH SOLVENT-CEMENTED JOINTS.
  5. GREASE INTERCEPTOR INCLUDING ADJUSTMENT RINGS AND CASTINGS SHALL BE VACUUM TESTED FOR WATER TIGHTNESS AFTER THE BACKFILL OPERATIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE LIVINGSTON COUNTY BUILDING DEPARTMENT SPECIFICATIONS FOR SEPTIC TANKS.
  6. ONLY KITCHEN WASTE SHALL BE DIVERTED TO THE GREASE TRAP.

**GREASE INTERCEPTOR 1000 GALLON**

NO SCALE

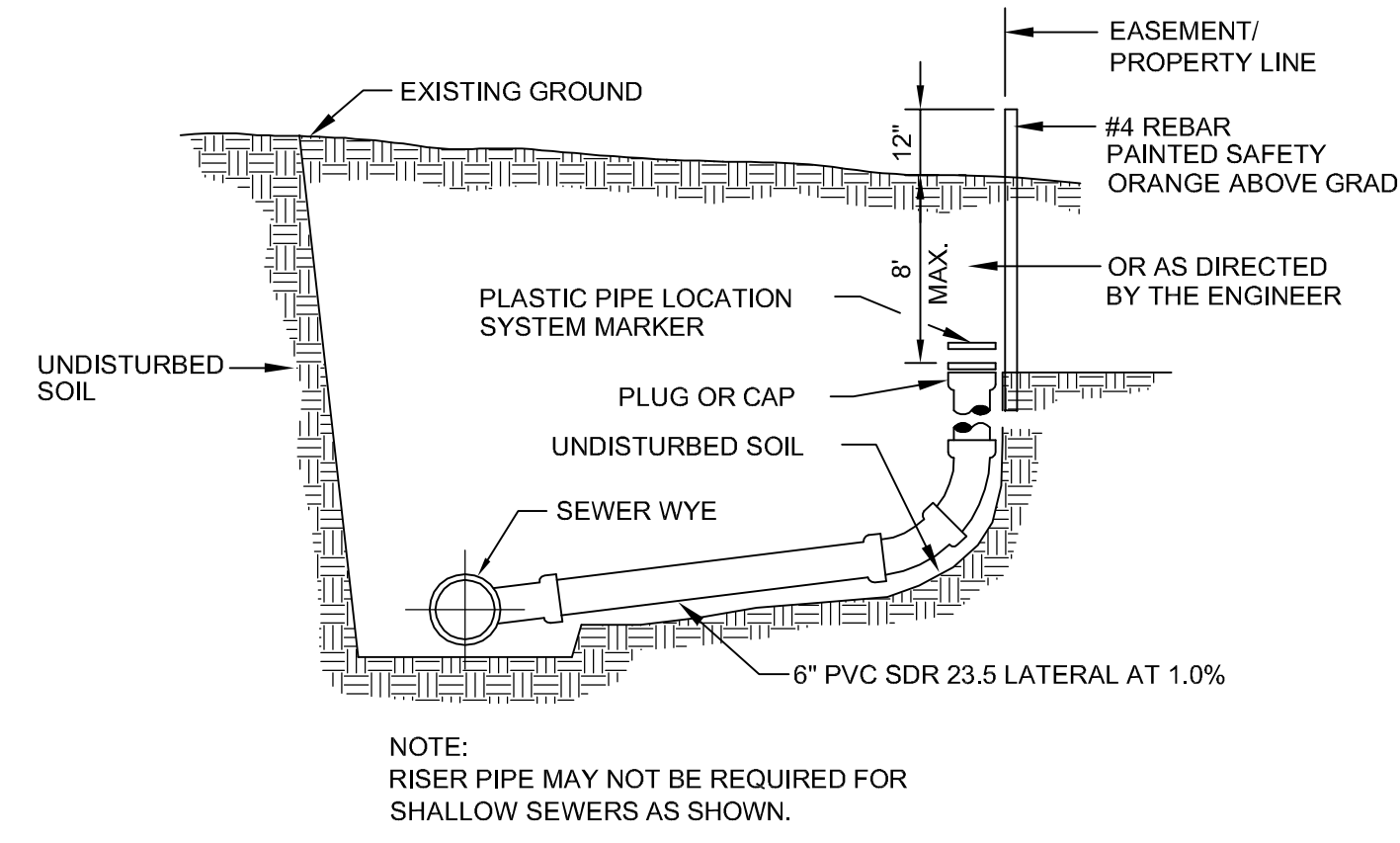
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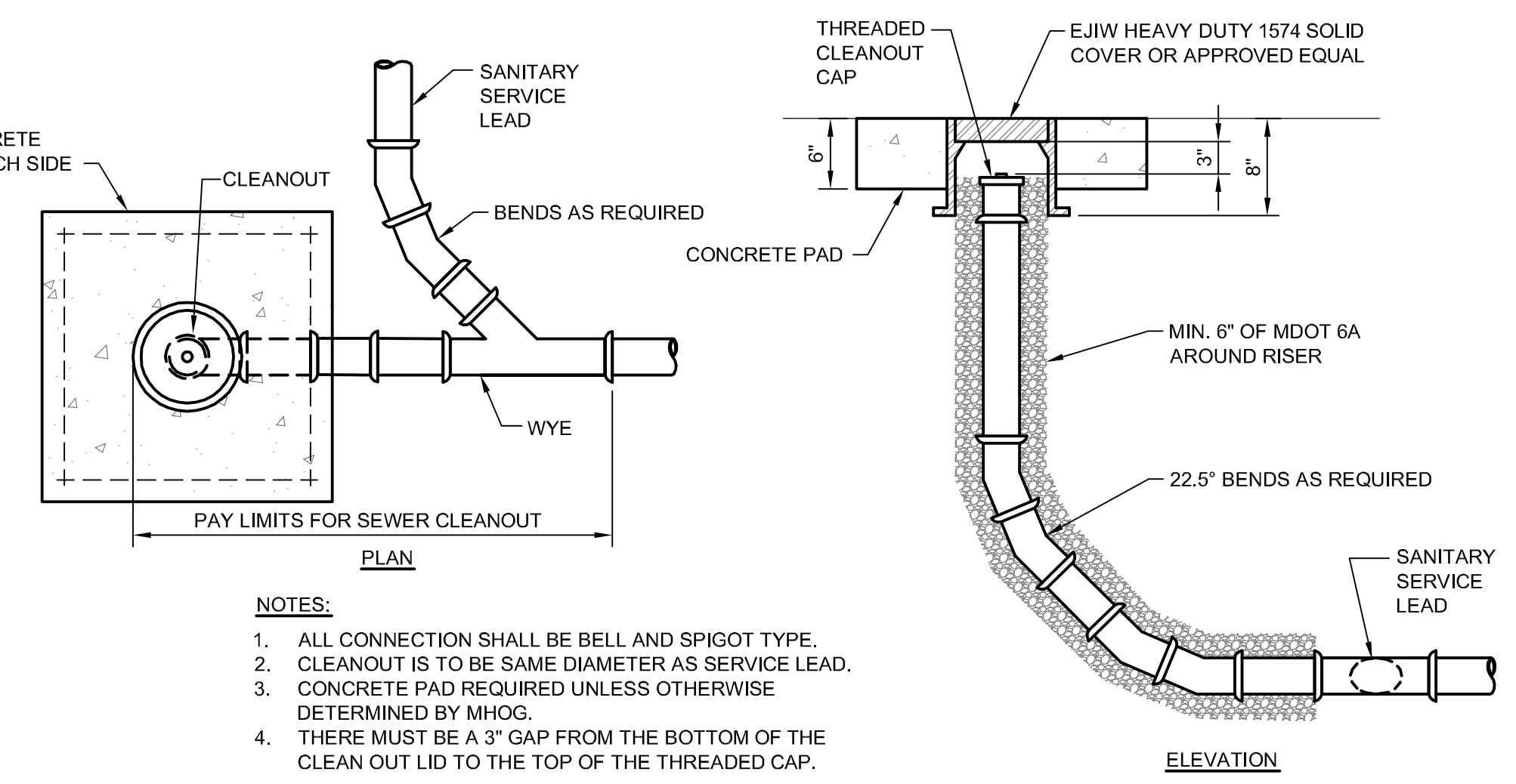
**GENOA OCEOLA**  
Sewer and Water Authority

**SANITARY SEWER**  
STANDARD DETAILS

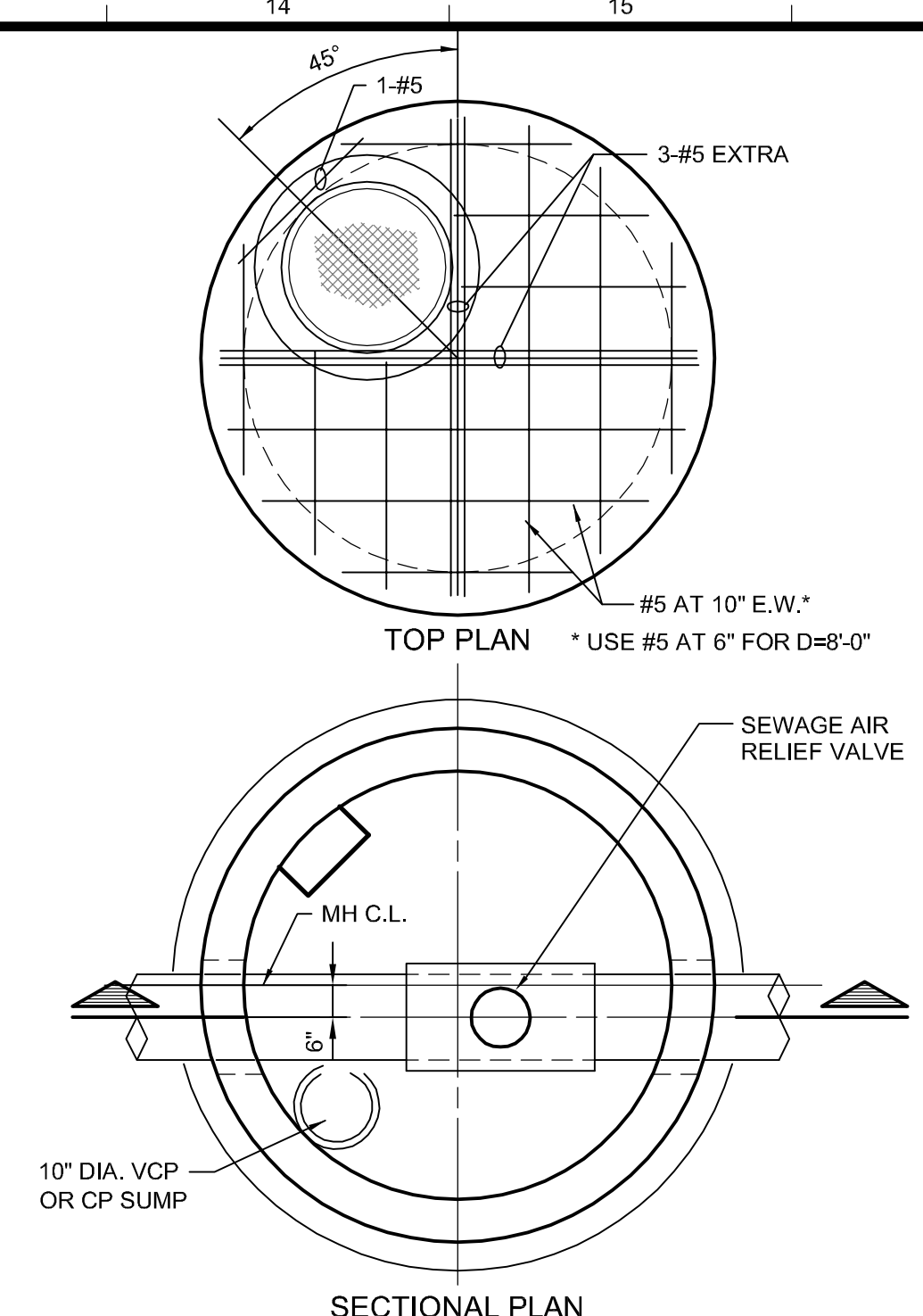
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 Issued Date: JANUARY - 2014  
 Updated: APRIL - 2015



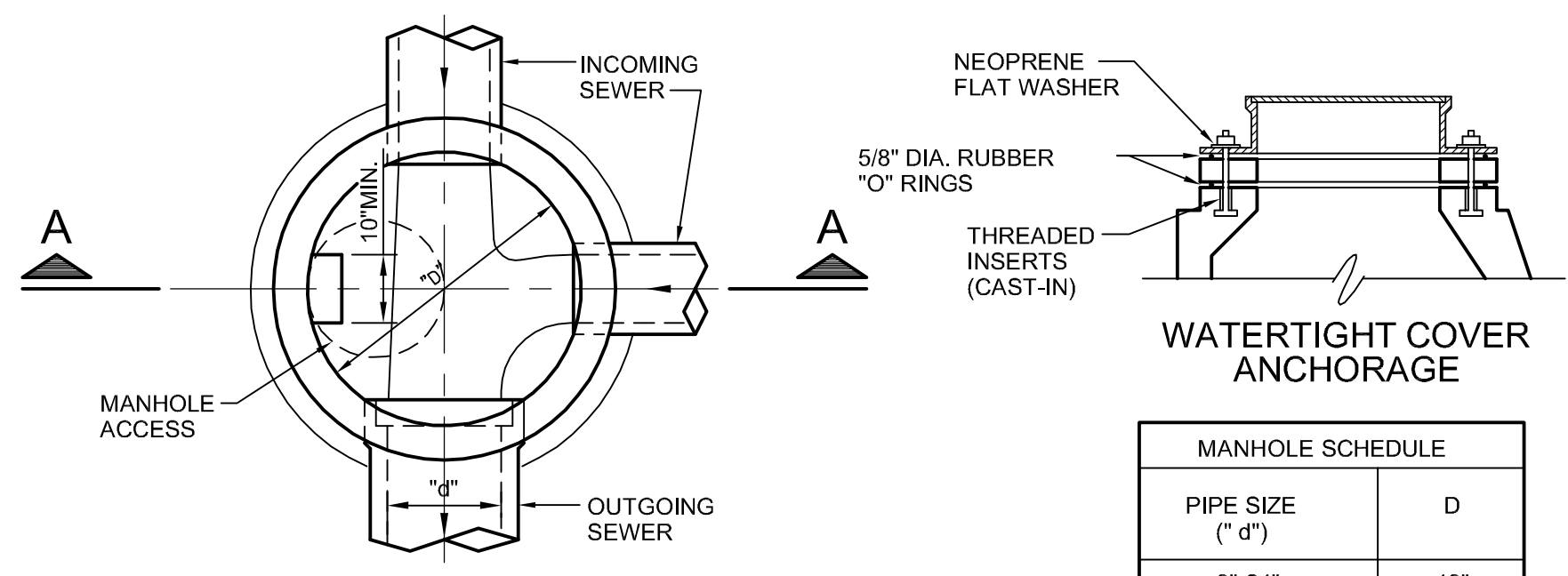
**SANITARY SEWER LATERAL**



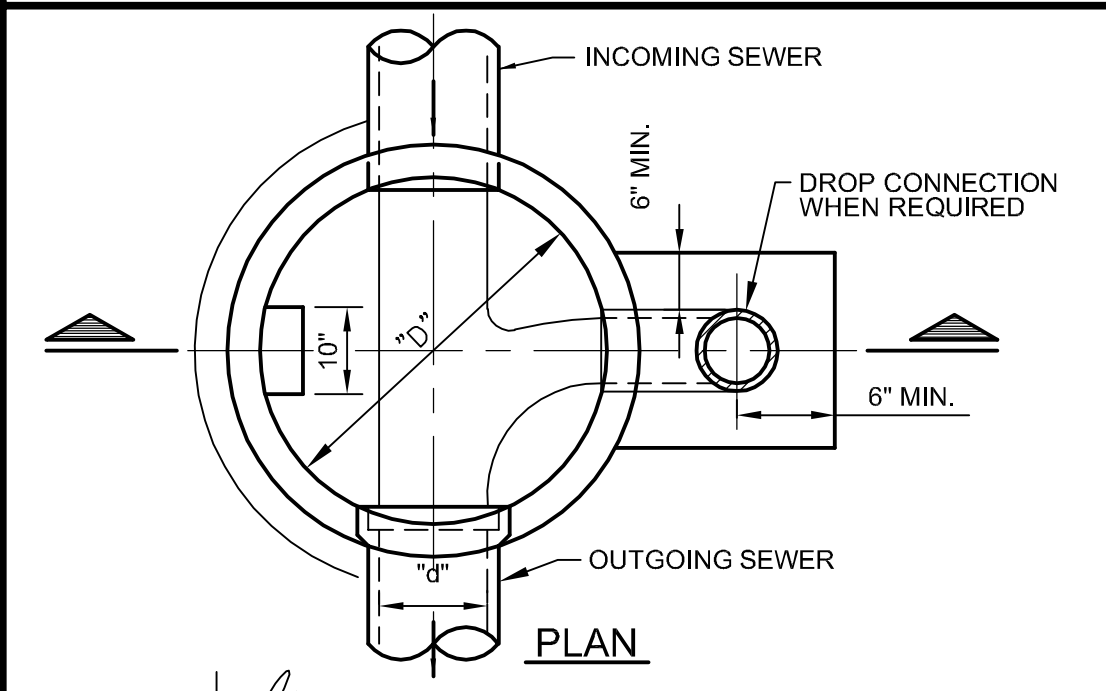
**SEWER CLEANOUT DETAIL**



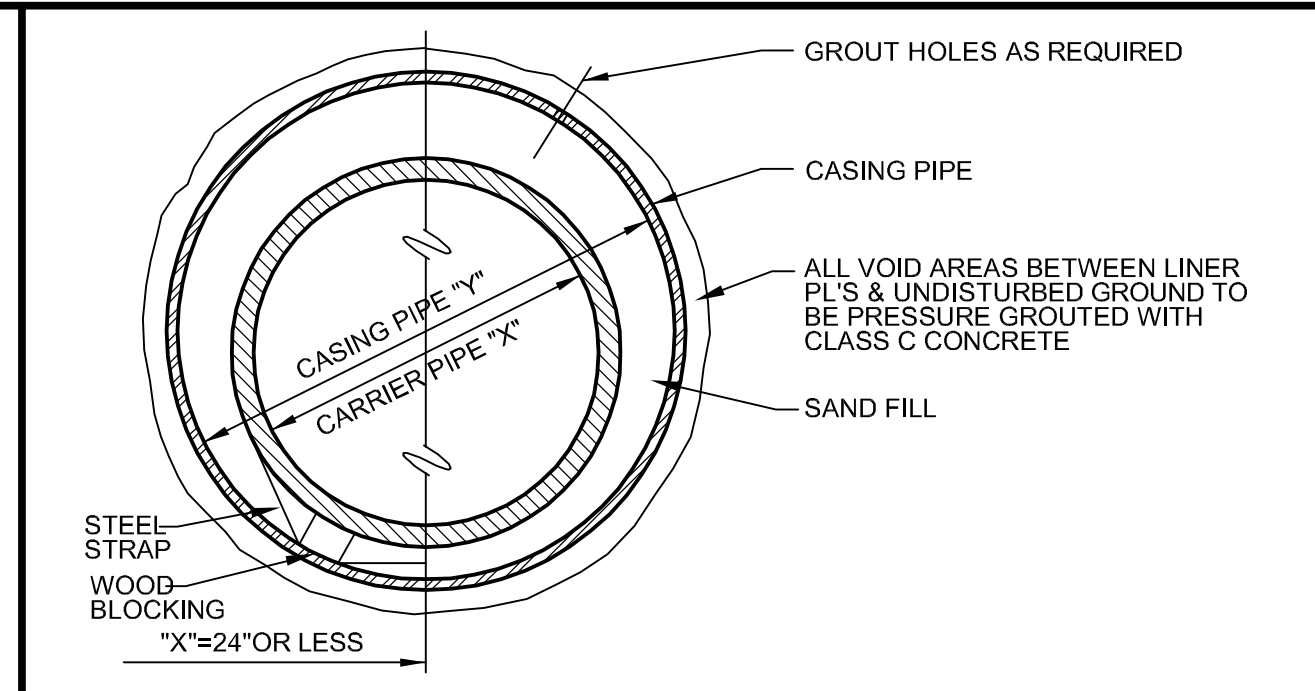
**AIR RELIEF STRUCTURE**



PIPE SIZE ("d")	D
8"-24"	48"
27"-36"	60"
42"-48"	72"
54"	84"

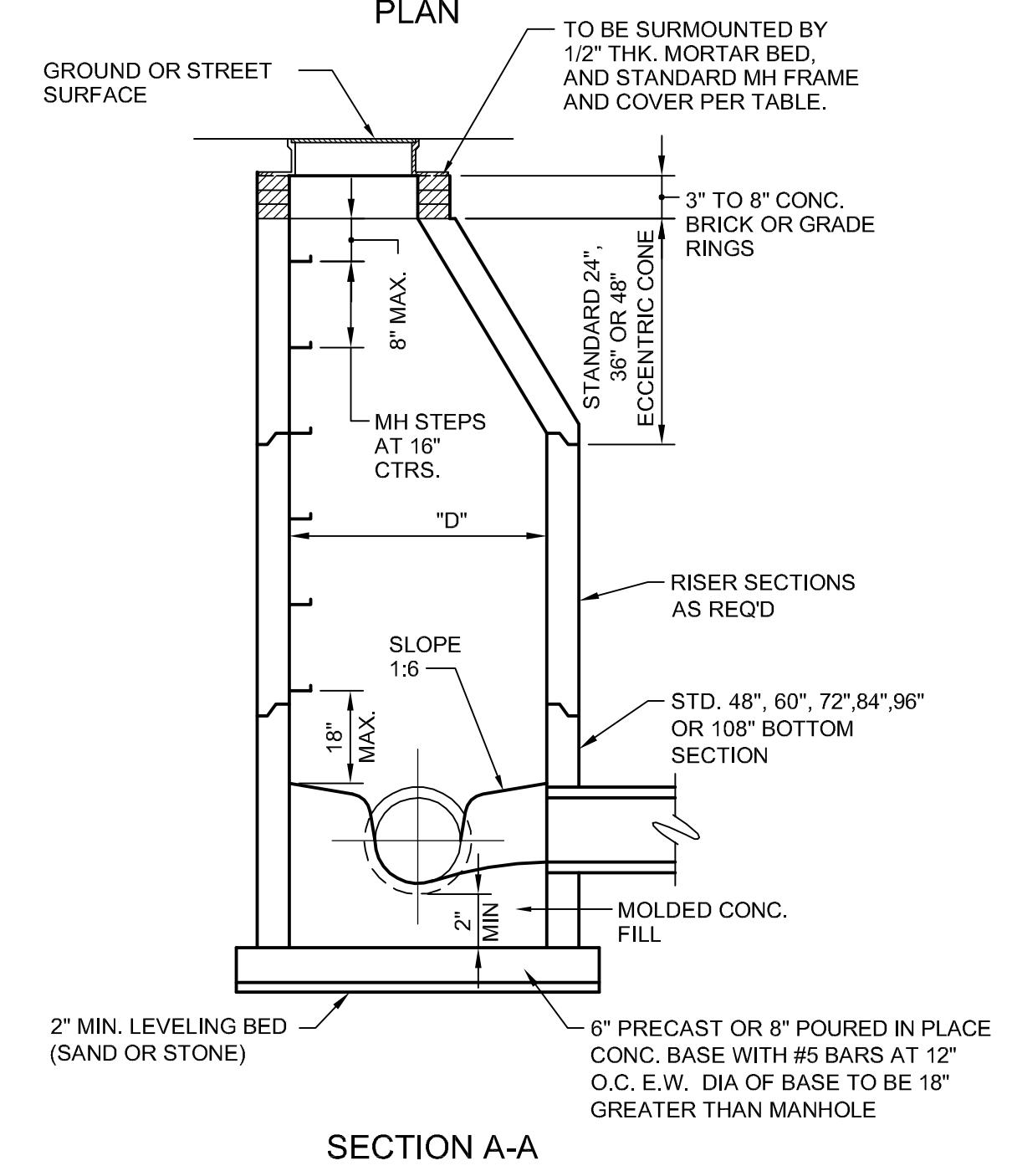


**DROP CONNECTION**



"X"	"Y" (MIN)
6"-8"	20"
10"-12"	24"
14"-15"	30"
18"-21"	36"
24"	42"

**CASING PIPE**



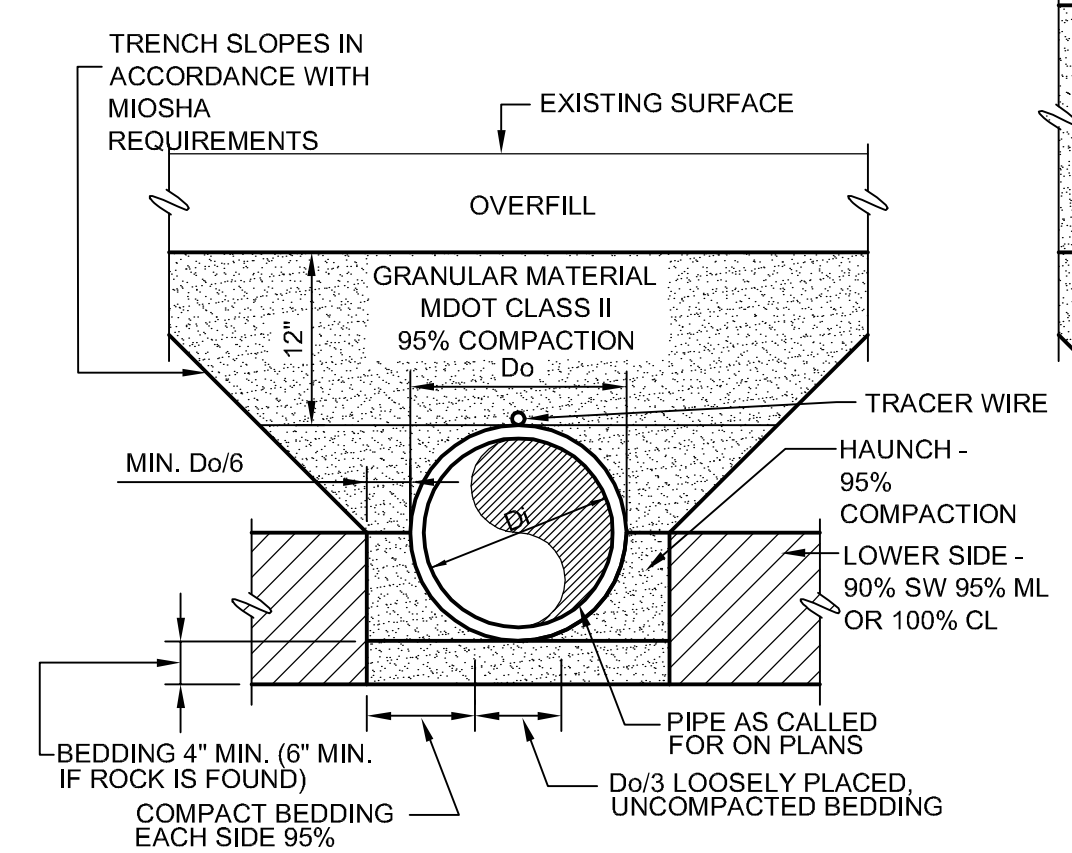
**SECTION A-A**

- NOTES:
- ALL SANITARY MANHOLES TO BE PRECAST REINFORCED CONCRETE WITH PREMIUM JOINTS. SEE SPECIFICATIONS FOR BASE SLAB AND PIPE OPENINGS AND CONNECTIONS.
  - MANHOLE CONES SHALL BE THE ECCENTRIC TYPE.
  - PROVIDE 6" OF COMPACTED GRANULAR MATERIAL UNDER ALL PRECAST CONCRETE BASE SLPVC.
  - FORCE MAINS CONNECT DIRECTLY TO A MANHOLE SHALL BE INSTALLED SO THAT THE ELEVATION OF THE PIPE CROWNS MATCH. THE FORCE MAIN SHALL BE DIRECTED DOWNWARD INTO THE FLOW CHANNEL.
  - FOR SANITARY SEWERS ALL PIPES SHALL ENTER MANHOLE THROUGH RUBBER BOOTED CONNECTION.

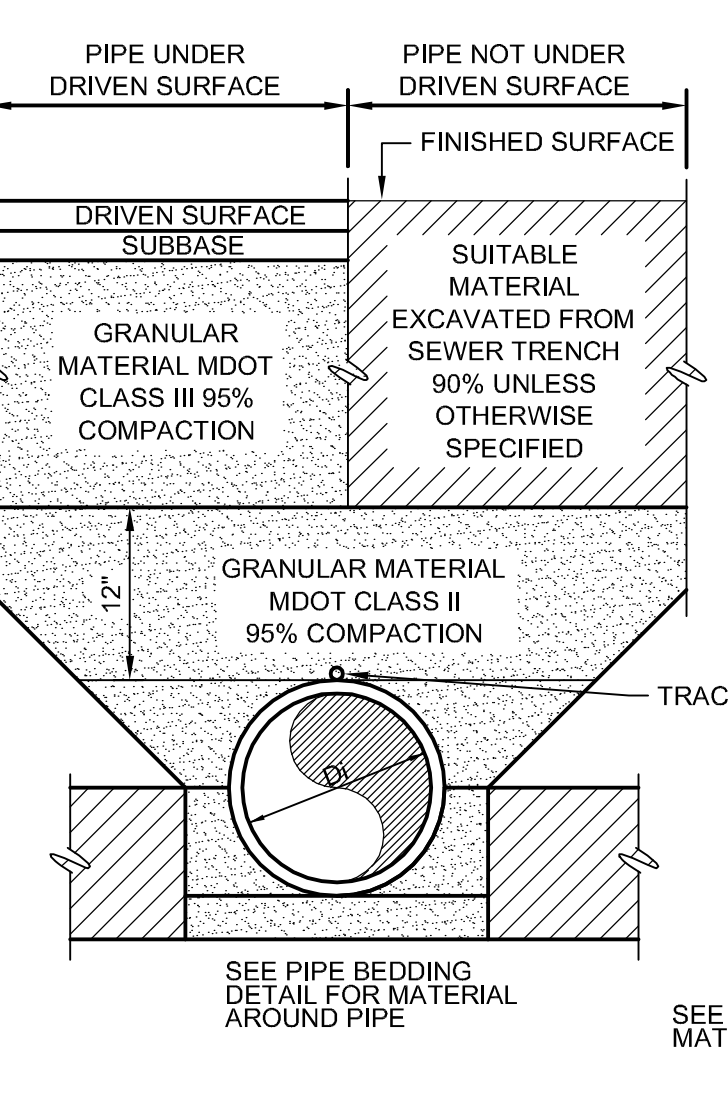
TYPE	TYPE OF COVER	MANUFACTURER OR EQUAL	
		EAST JORDAN	NEENAH
MH	SANITARY - SOLID SELF-SEALING	1040.0000	R-1642
MH	SANITARY - SOLID WATERTIGHT	1040-APT	R-1916-F
CO	SOLID	1574A	R-1973-A

**STANDARD MANHOLE**

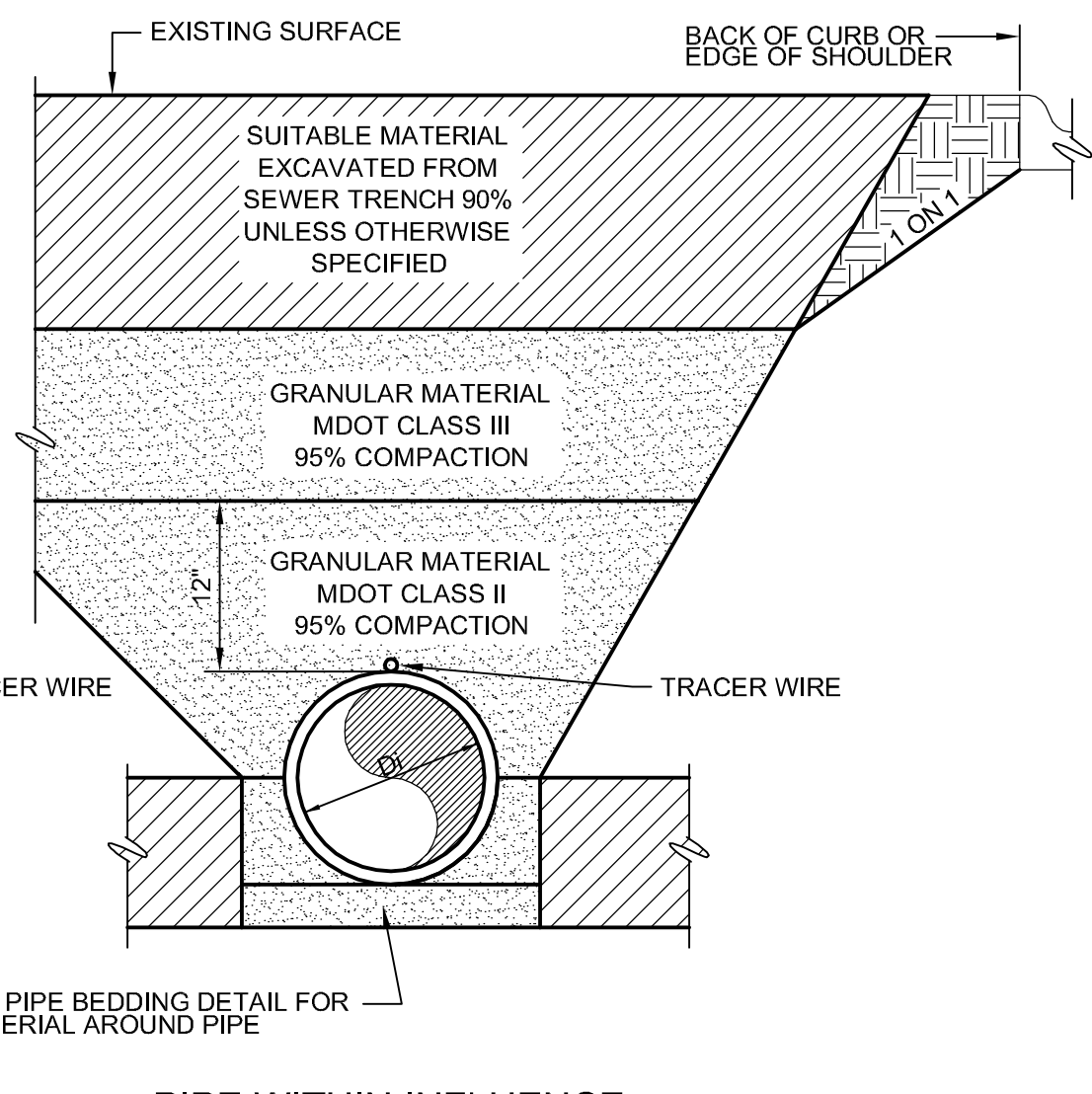
- NOTES:
- COMPACTION PRESENTED AS MINIMUM STANDARD PROCTOR VALUES.
  - MATERIALS AROUND THERMOPLASTIC PIPE WITH DIAMETER < 6 INCHES SHALL PASS 0.5 INCH SIEVE, MATERIALS AROUND OTHER PIPES SHALL PASS 1.5 INCH SIEVE.
  - MATERIALS AROUND HDPE PIPE TO BE MDOT 6A OR 21AA.
  - DRIVEN SURFACE IS DRIVEWAY, PARKING AREA, ROAD BED OR SHOULDER.
  - UTILITY TRENCHES LOCATED WITHIN A MDOT ROW SHALL CONFORM TO MDOT STANDARD DETAIL R-83.
  - TRACER WIRE IS REQUIRED ON FORCE MAIN ONLY AND SHALL BE BROUGHT TO GRADE AT A MINIMUM EVERY 1000 FEET IN A APPROVED CAST IRON TRACER WIRE BOX ENCASED IN CONCRETE OR WITH AN APPROVED GREEN MARKER POST.



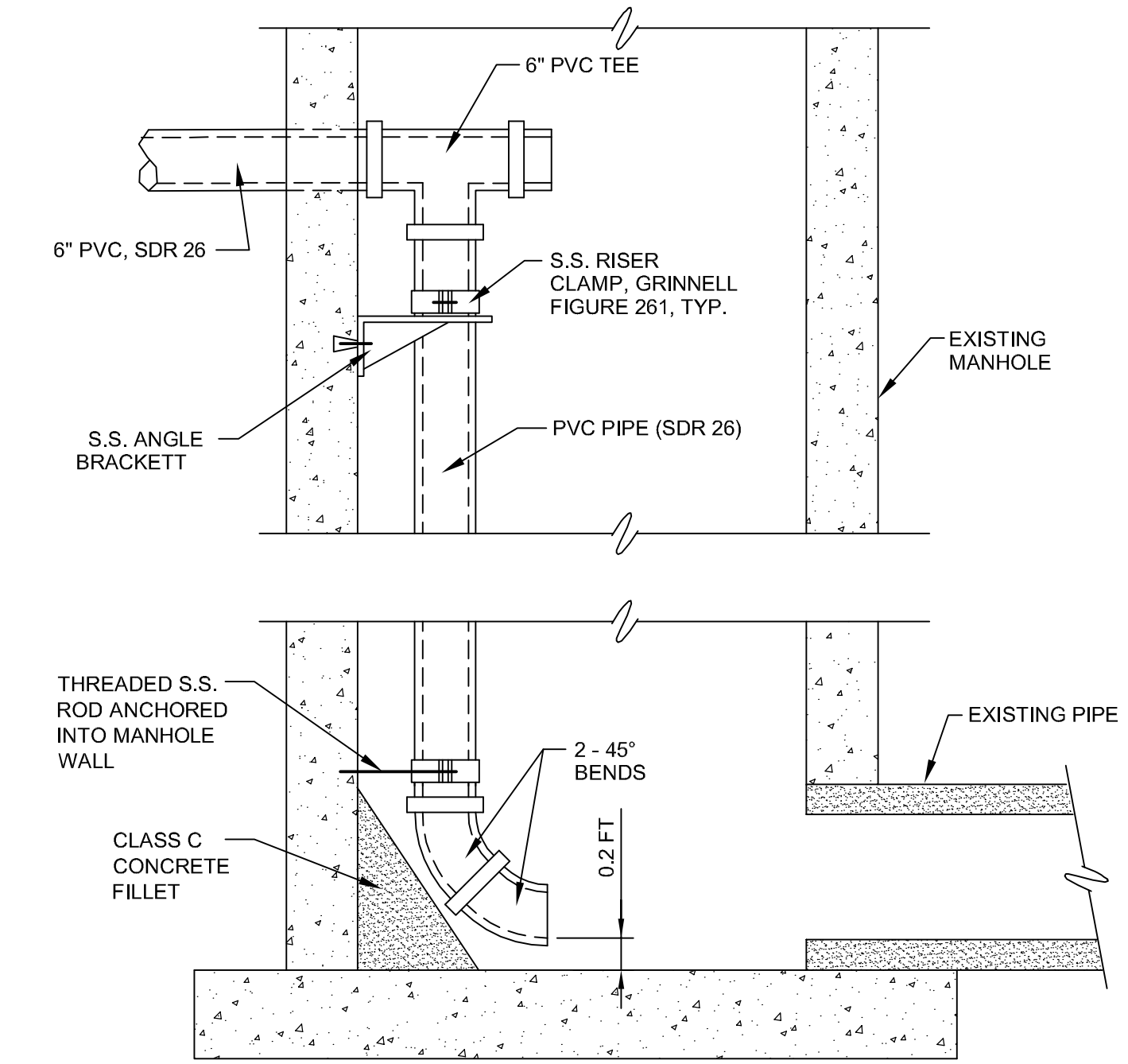
**PIPE BEDDING**



**PIPE UNDER/NOT UNDER DRIVEN SURFACE**



**PIPE WITHIN INFLUENCE OF DRIVEN SURFACE**



**INTERIOR SEWER LATERAL DROP CONNECTION**



**GENOA OCEOLA**  
Sewer and Water Authority

**SANITARY SEWER**  
STANDARD DETAILS

Scale: NONE  
Issued Date: JANUARY - 2014



### PIPE RESTRAINT SCHEDULE

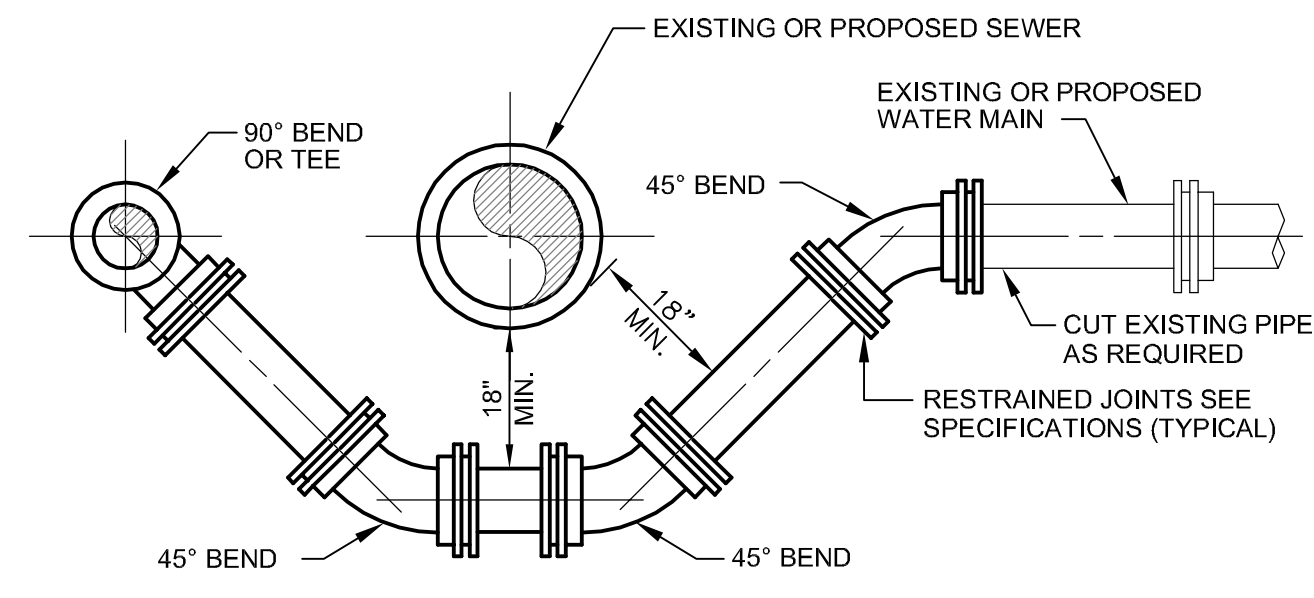
GROUND BURIED PRESSURE PIPE - POLYETHYLENE ENCASED DUCTILE IRON PIPE

PIPE DIAMETER	TEES, 90° BENDS	45° BENDS	22-1/2° BENDS	11-1/4° BENDS	DEAD ENDS	REDUCERS (ONE SIZE REDUCTION)*	REDUCERS (TWO SIZE REDUCTION)*
4	13	5	3	1	40	--	--
6	19	8	4	2	58	31	--
8	24	10	5	2	75	30	70
12	34	14	7	3	107	57	116
16	43	18	9	4	139	59	137
20	52	22	10	5	169	59	134
24	61	25	12	6	199	60	132
30	73	30	15	7	242	85	168
36	84	35	17	8	281	84	168

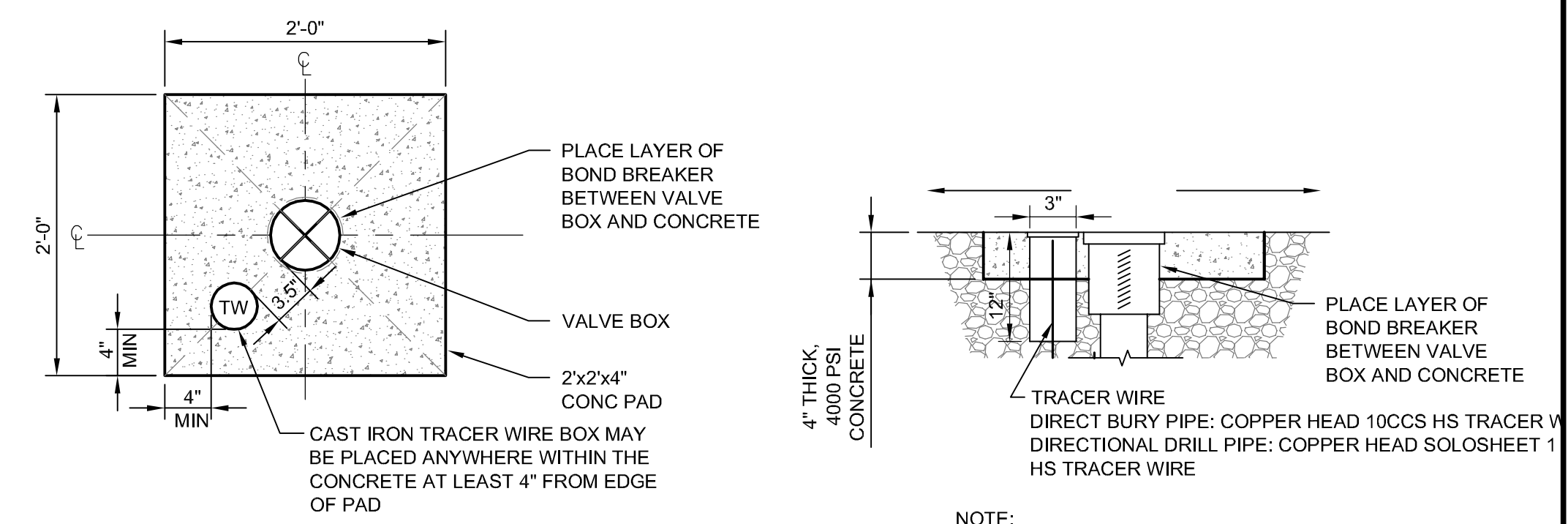
- LENGTHS OF PIPE RESTRAINT ARE GIVEN IN FEET.
- IF REQUIRED PIPE DIAMETER IS NOT LISTED IN THIS TABLE, THE NEXT LARGEST PIPE DIAMETER SHALL BE USED.
- THIS TABLE IS BASED ON A TEST PRESSURE OF 180 PSI (OPERATING PRESSURE PLUS WATER HAMMER. FOR OTHER TEST PRESSURES, ALL VALUES TO BE INCREASED OR DECREASED PROPORTIONALLY.
- THE VALUES PROVIDED OF RESTRAINT LENGTH ARE IN EACH DIRECTION FROM THE POINT OF DEFLECTION OR TERMINATION EXCEPT FOR TEES, AT WHICH ONLY THE BRANCH IN THE DIRECTION OF THE STEM.
- IF TIE RODS ARE USED, USE FOUR RODS MINIMUM AND ADD 1/8-INCH TO BAR DIAMETER AS CORROSION ALLOWANCE.

\* SIZE REDUCTION IS BASED UPON THE PIPE DIAMETER SHOWN IN THIS TABLE.

BASED UPON: INTERNAL PRESSURE: 180  
PIPE DEPTH: 5  
BEDDING CLASS: TYPE 4  
SOIL TYPE: GOOD SAND  
SAFETY FACTOR: 2



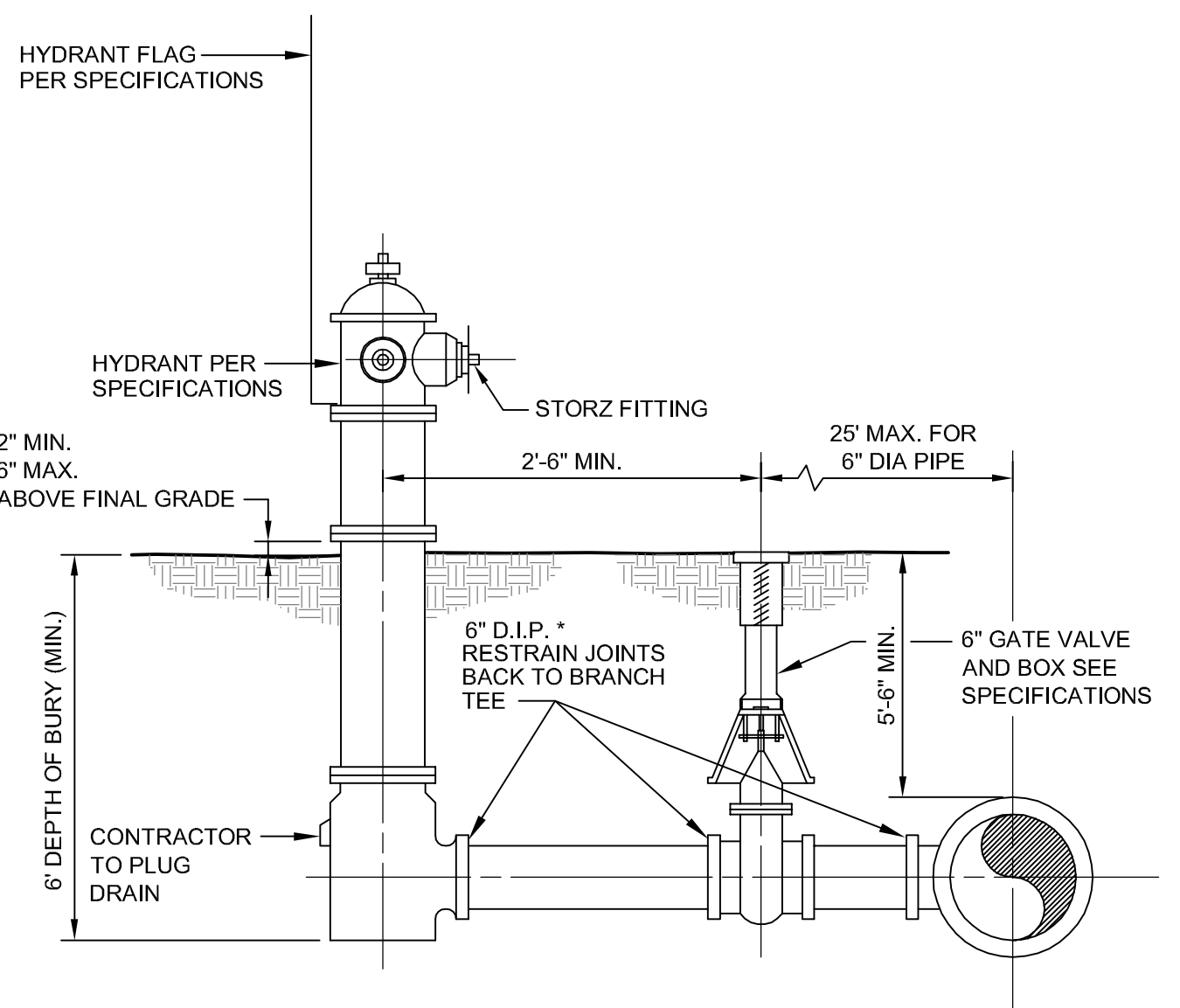
**WATER MAIN UTILITY OFFSET**



NOTE: ALL BOXES & ADJOINING TW BOXES SHALL BE ENCASED IN A CONC. PAD UNLESS OTHERWISE DETERMINED BY MHOG.

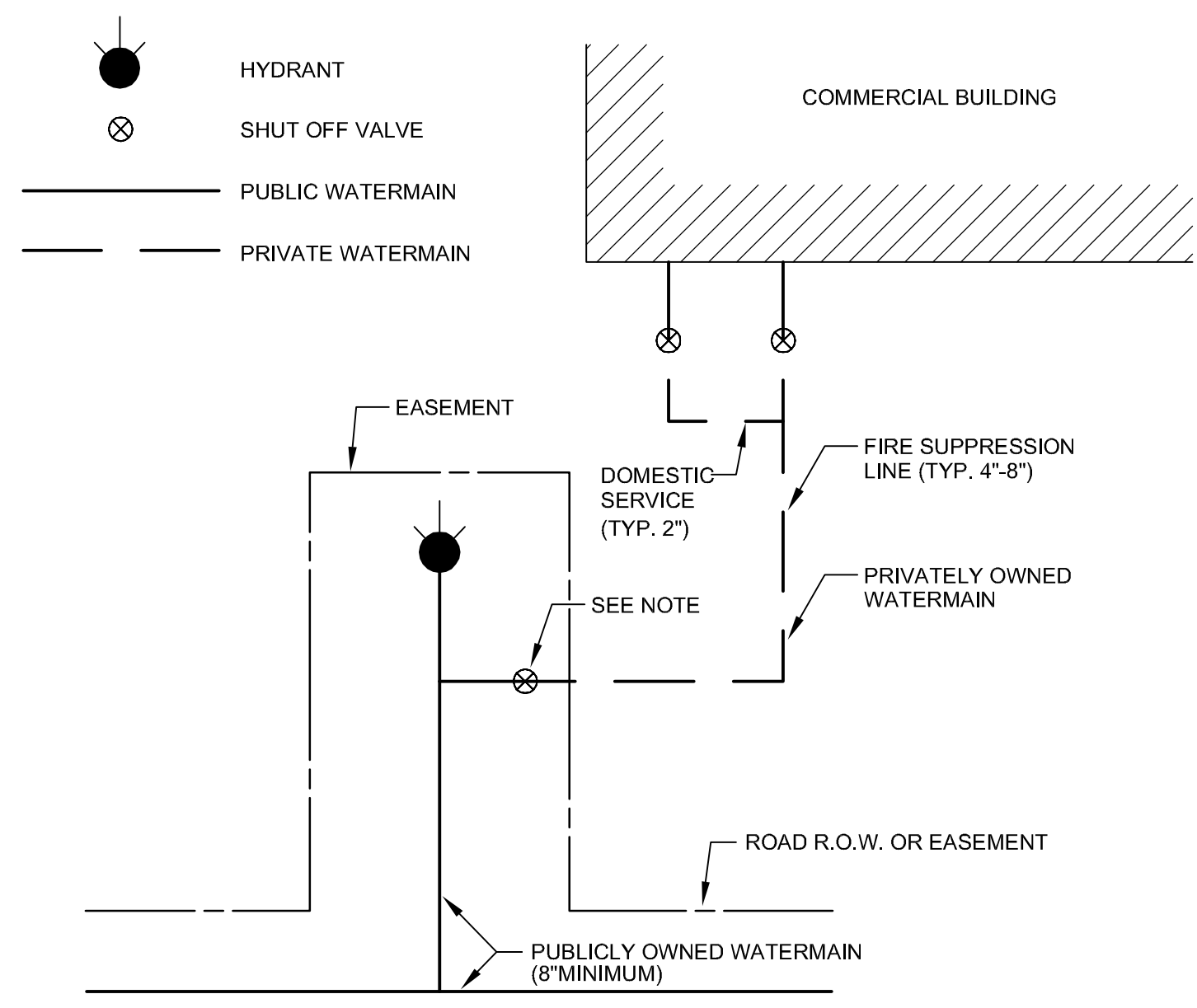
NOTE:  
1. TRACER WIRE BOXES LOCATED WITHOUT A VALVE BOX ONLY REQUIRE AN 18" X 18" CONCRETE PAD.  
2. TRACER WIRE BOX SHALL HAVE A LOCKING LID W/STANDARD AWWA PENTAGON KEY.

**PLAN**  
**SECTION**  
**VALVE/TRACER WIRE BOX IN CONCRETE DETAIL**  
NO SCALE



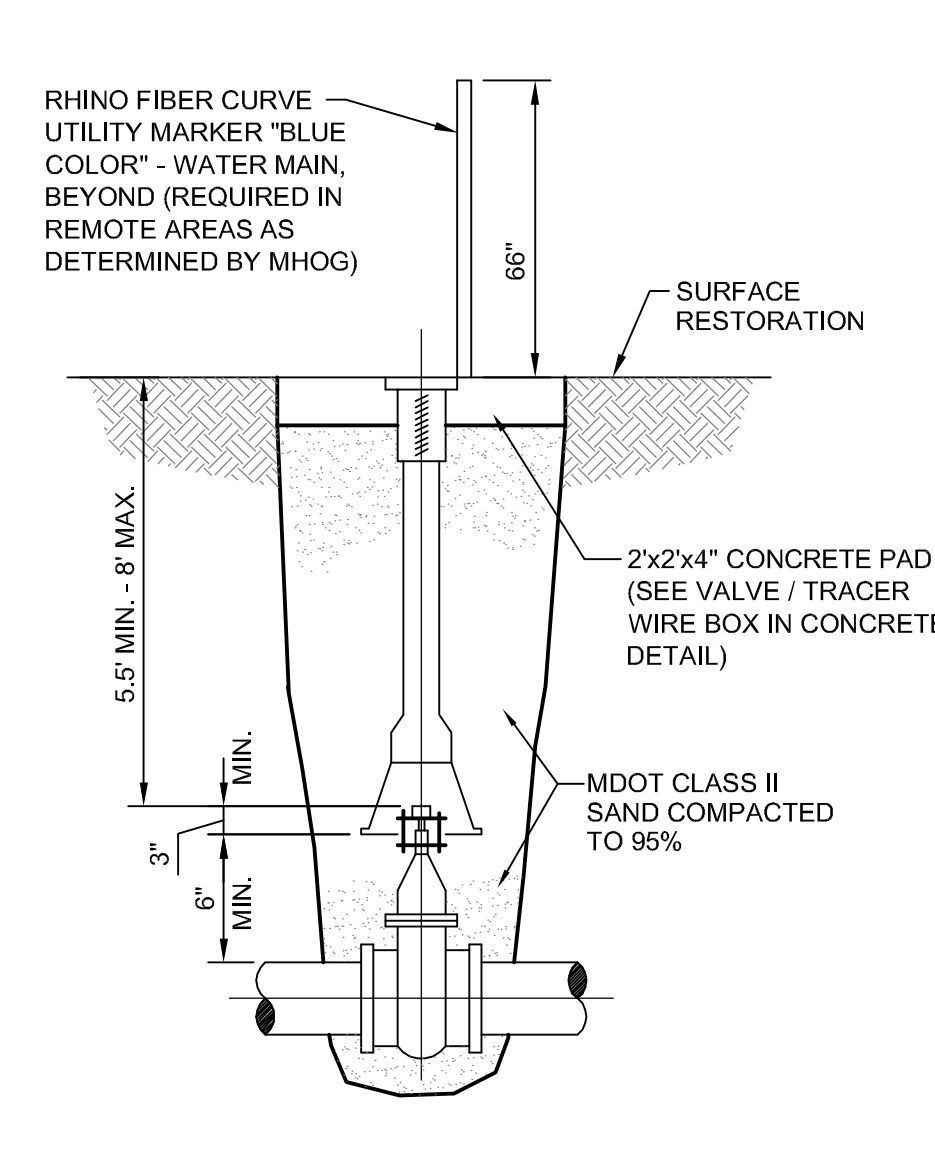
\* THE LENGTH OF 6" PIPE FROM THE MAIN TO THE HYDRANT ASSEMBLY CANNOT EXCEED 25'. ANY PIPE OVER 25 FEET SHALL BE 8" DIAMETER MINIMUM AND DESIGNED PER MHOG SPECIFICATIONS.

**FIRE HYDRANT ASSEMBLY**



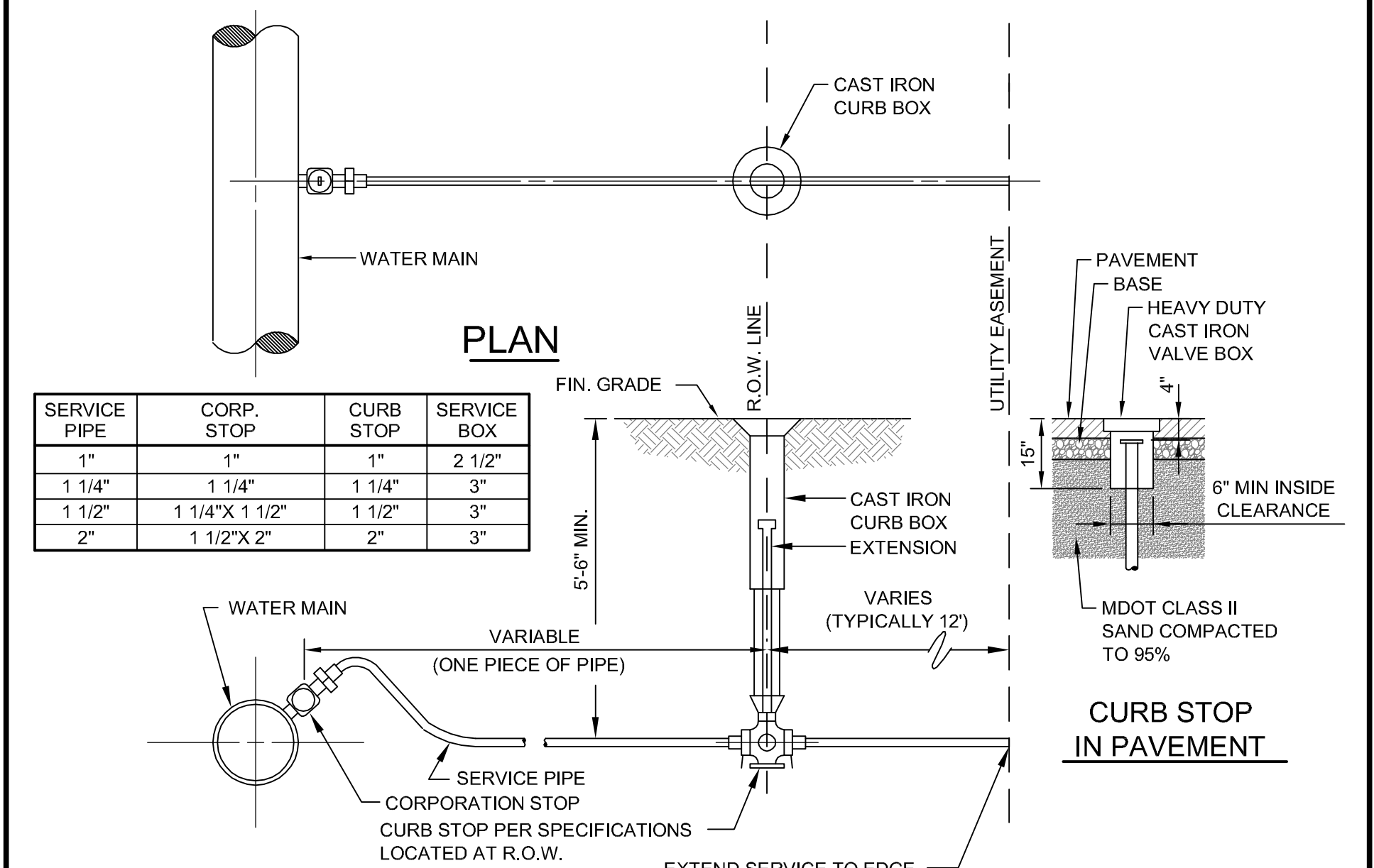
NOTE: PUBLICLY OWNED SHUT OFF VALVE TO BE LOCATED IN EASEMENT.

**COMMERCIAL BUILDING WATER SERVICE LAYOUT**

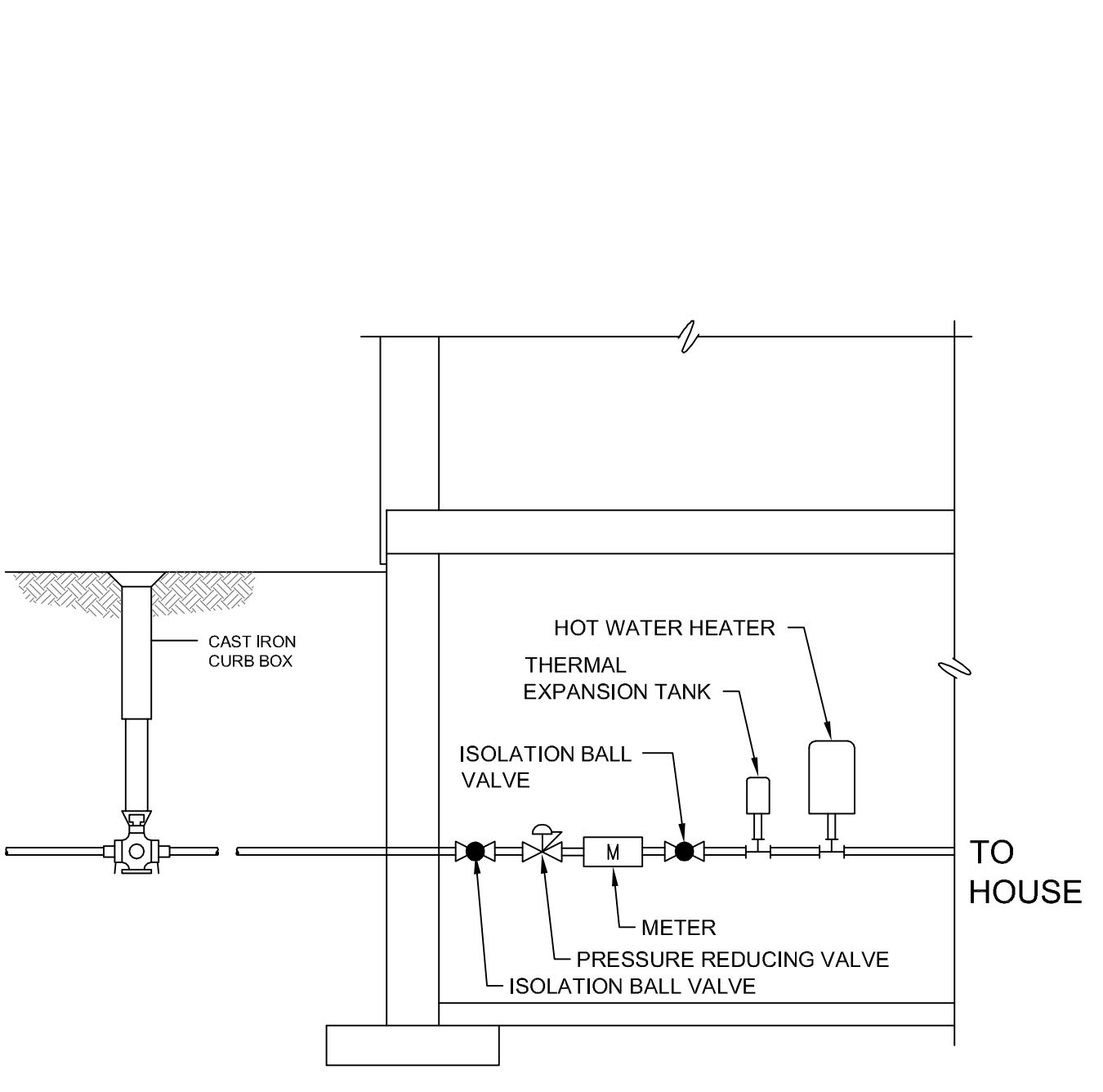


NOTES:  
1. VALVE BOX SHALL NOT REST ON VALVE OR MAIN LINE PIPE.  
2. A VALVE STEM EXTENSION WITH CENTERING RING IS REQUIRED FOR VALVES BURIED DEEPER THAN 6'.

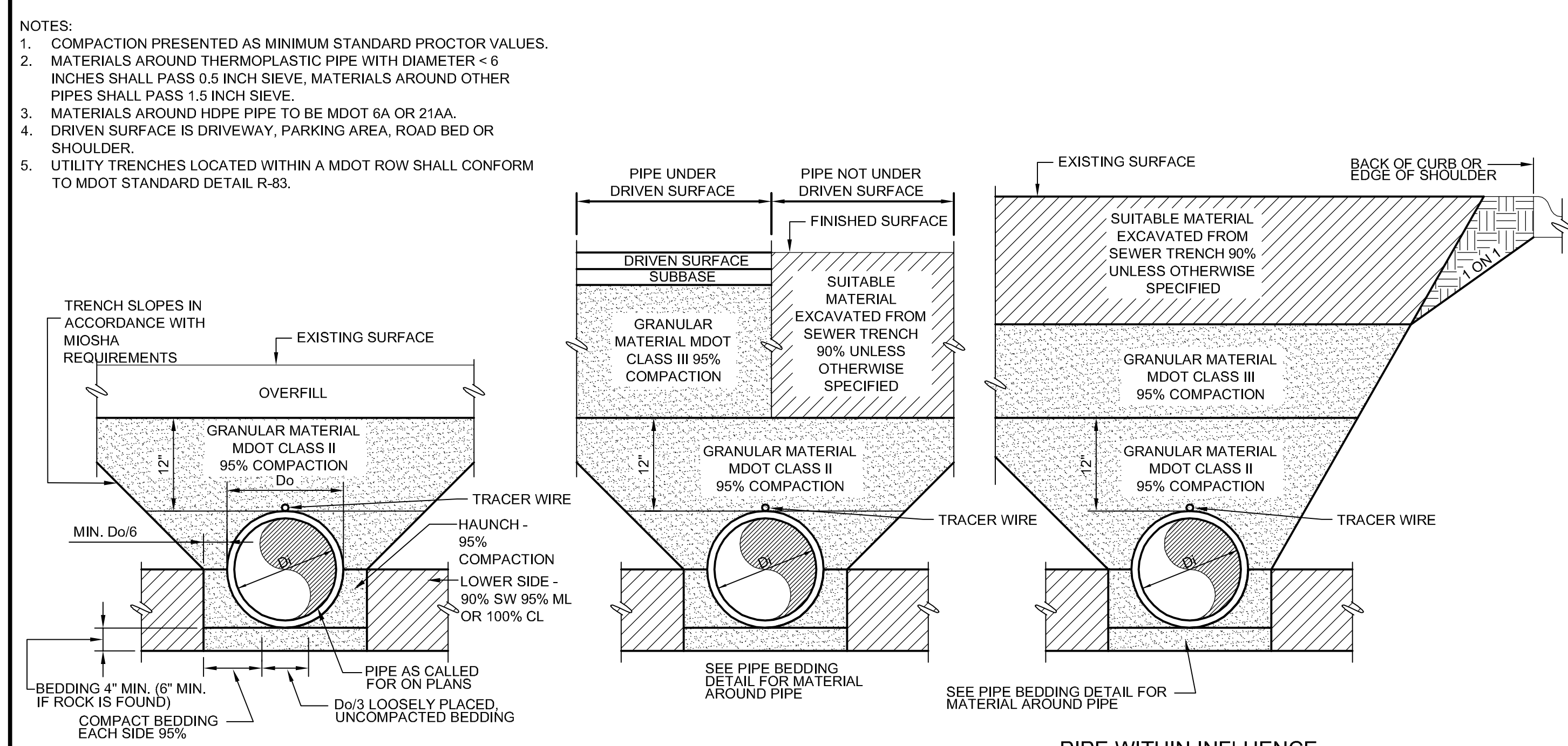
**GATE VALVE AND BOX**



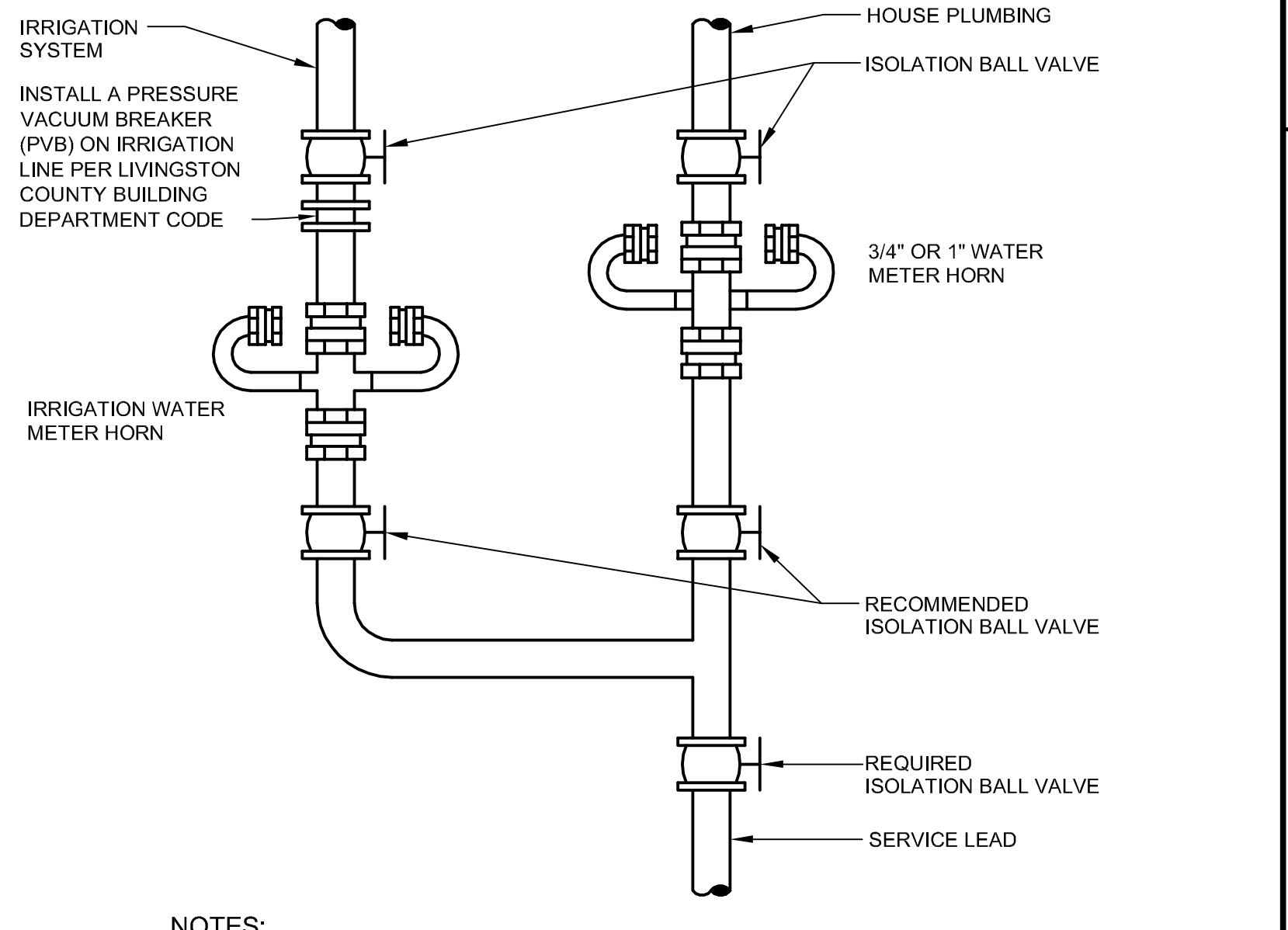
**SECTION**  
**WATER SERVICE LATERAL**



**PRIVATE RESIDENCE**  
**PRESSURE REDUCING VALVE (PRV)**



**PIPE BEDDING**  
**PIPE UNDER/NOT UNDER DRIVEN SURFACE**  
**TRENCH EXCAVATION & PIPE BEDDING**  
**PIPE WITHIN INFLUENCE OF DRIVEN SURFACE**



NOTES:  
1. ALL METERS ARE TO BE INSTALLED HORIZONTALLY IN A DRY, CLEAN, SANITARY LOCATION THAT IS READILY ACCESSIBLE. THIS DRAWING IS NOT TO SCALE & IS ONLY A REPRESENTATION OF HOW THE METERS SHOULD BE INSTALLED. THE SECOND METER IS OPTIONAL FOR IRRIGATION USAGE. METERS SHOULD NOT BE INSTALLED IN LINE (ONE RIGHT AFTER THE OTHER).  
2. PROPERTIES DESIGNATED "HIGH HAZARD" PER THE MHOG CROSS CONNECTION RULES MANUAL WILL REQUIRE THE INSTALLATION OF A REDUCED PRESSURE ZONE (RPZ) BACK FLOW PREVENTION DEVICE.

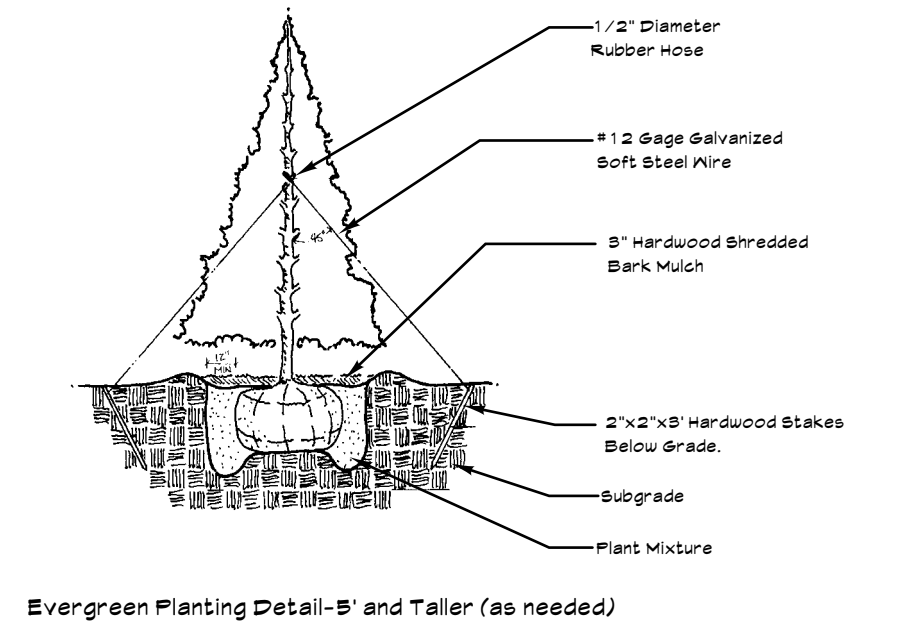
**TYPICAL METER HORN INSTALLATION**



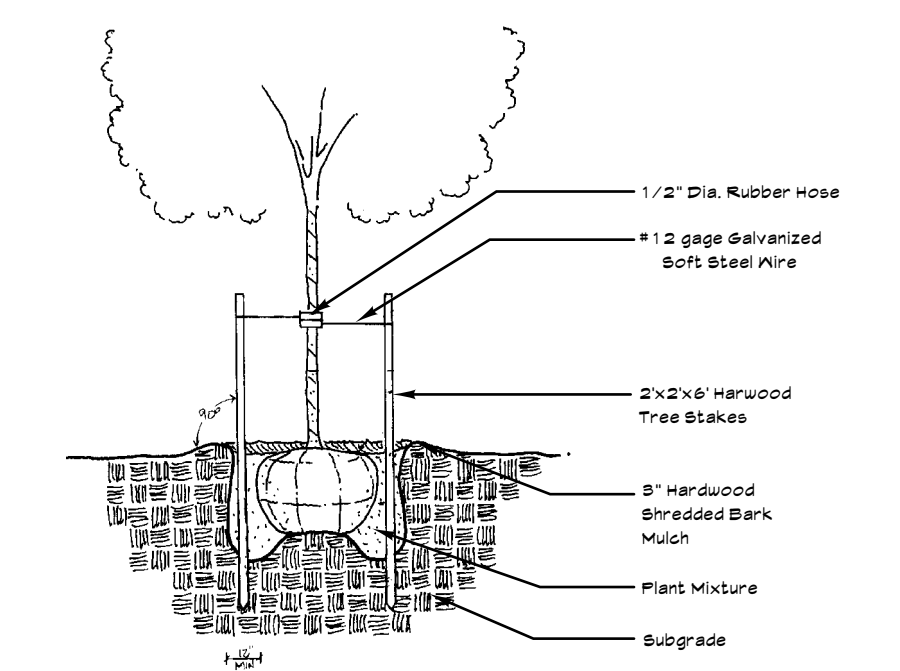
**MARION HOWELL OCEOLA GENOA**  
Sewer and Water Authority

Scale: NONE  
Issued Date: JANUARY - 2014

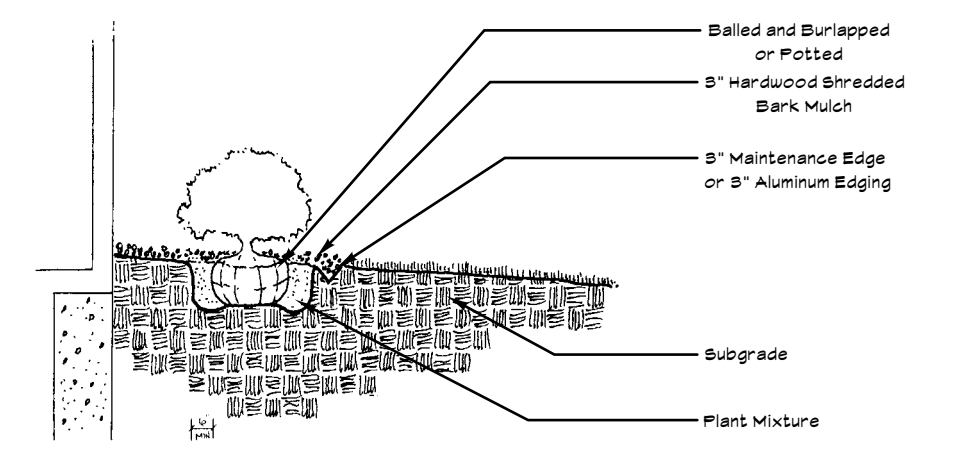
**WATER MAIN**  
**STANDARD DETAILS**



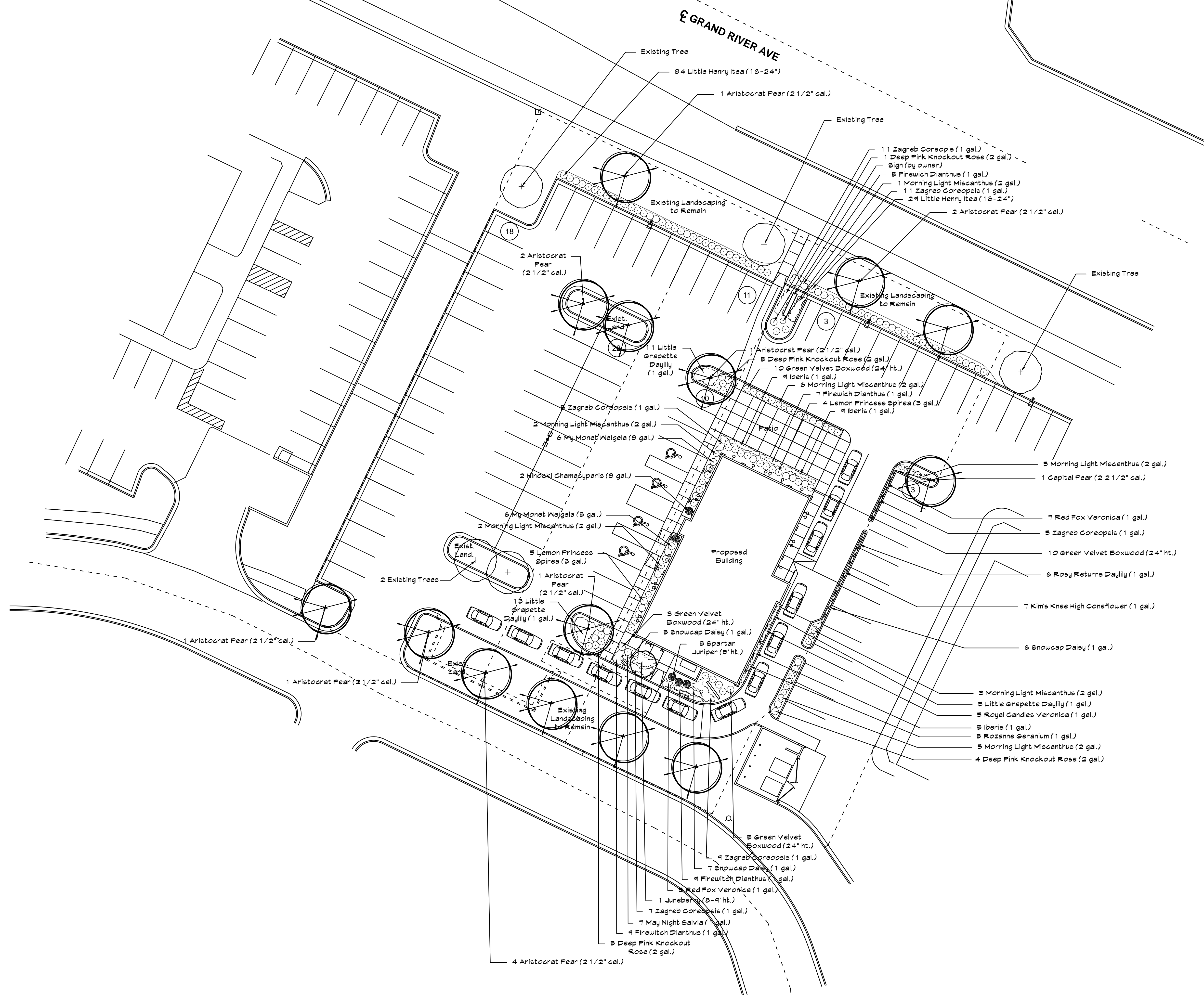
Evergreen Planting Detail-5' and Taller (as needed)



Deciduous Trees 5\"/>

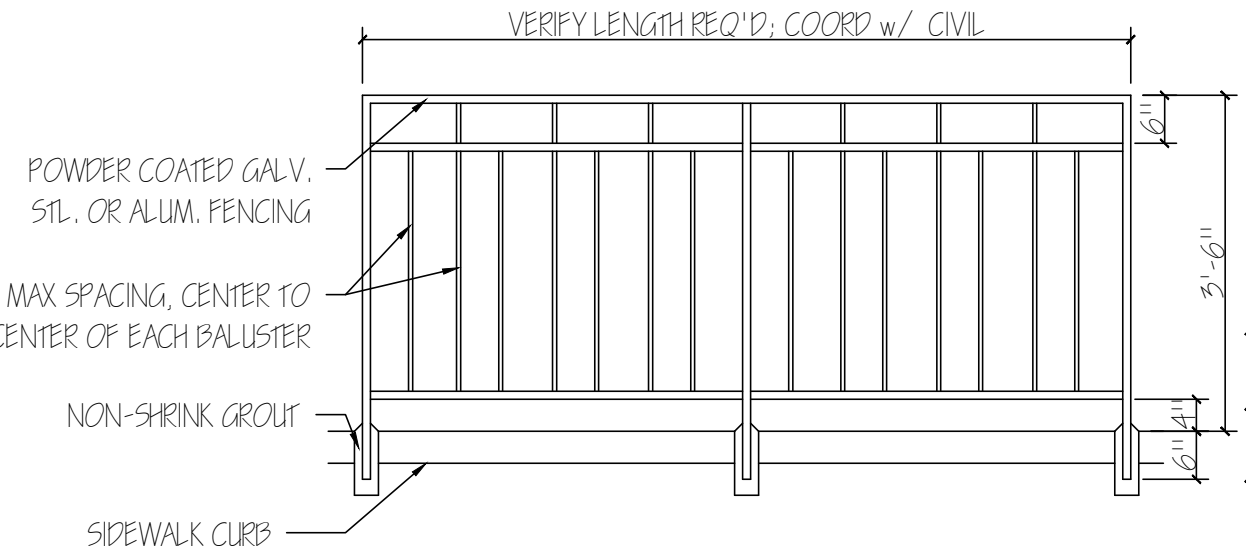


Shrub Planting Detail

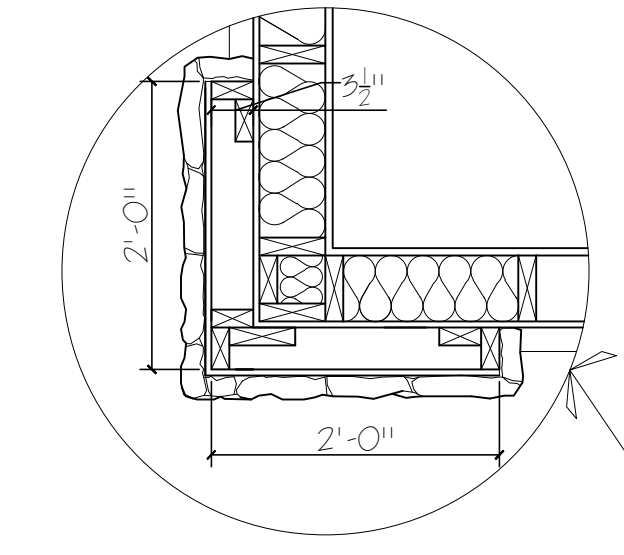
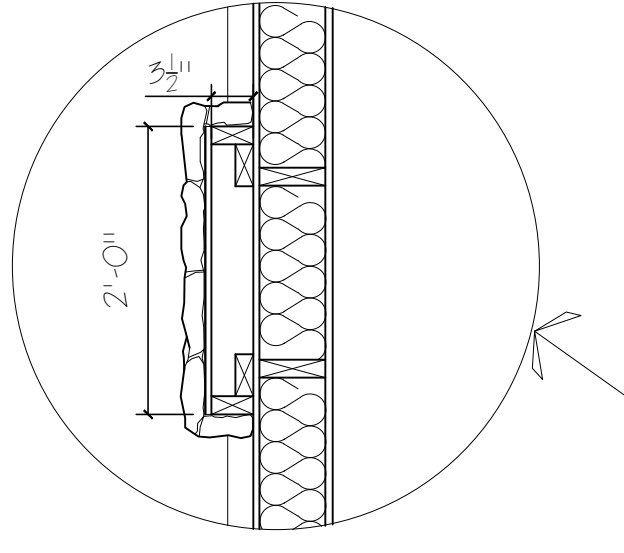


- Notes:**
- All landscaping to be installed by a qualified Landscape Contractor. No substitutions without prior authorization from Landscape Architect.
  - All plantings, including trees in lawn areas shall be mulched with 3\"/>

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**GUARD RAIL DETAIL**  
1/2" = 1'-0"



**NOTES:**

G.C. SHALL VERIFY & COORDINATE W/ ANY CLEARANCE REQUIREMENTS FOR WATER METER AND ELECTRICAL TRANSFORMER.

PROVIDE SEALED PENETRATIONS INTO BUILDING FOR CABLE T.V. & TELEPHONE. COORDINATE W/ OWNER.

VERIFY LOCAL REQUIREMENTS FOR ELECTRIC TRANSFORMER PAD / BLAST WALLS IF NECESSARY.

G.C. WILL BE REQUIRED TO COORDINATE I.T., POWER, SECURITY, & P.O.S. TO ROOM 117.

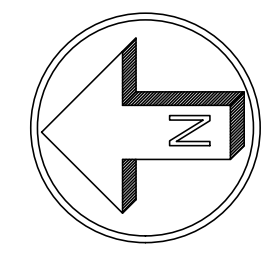
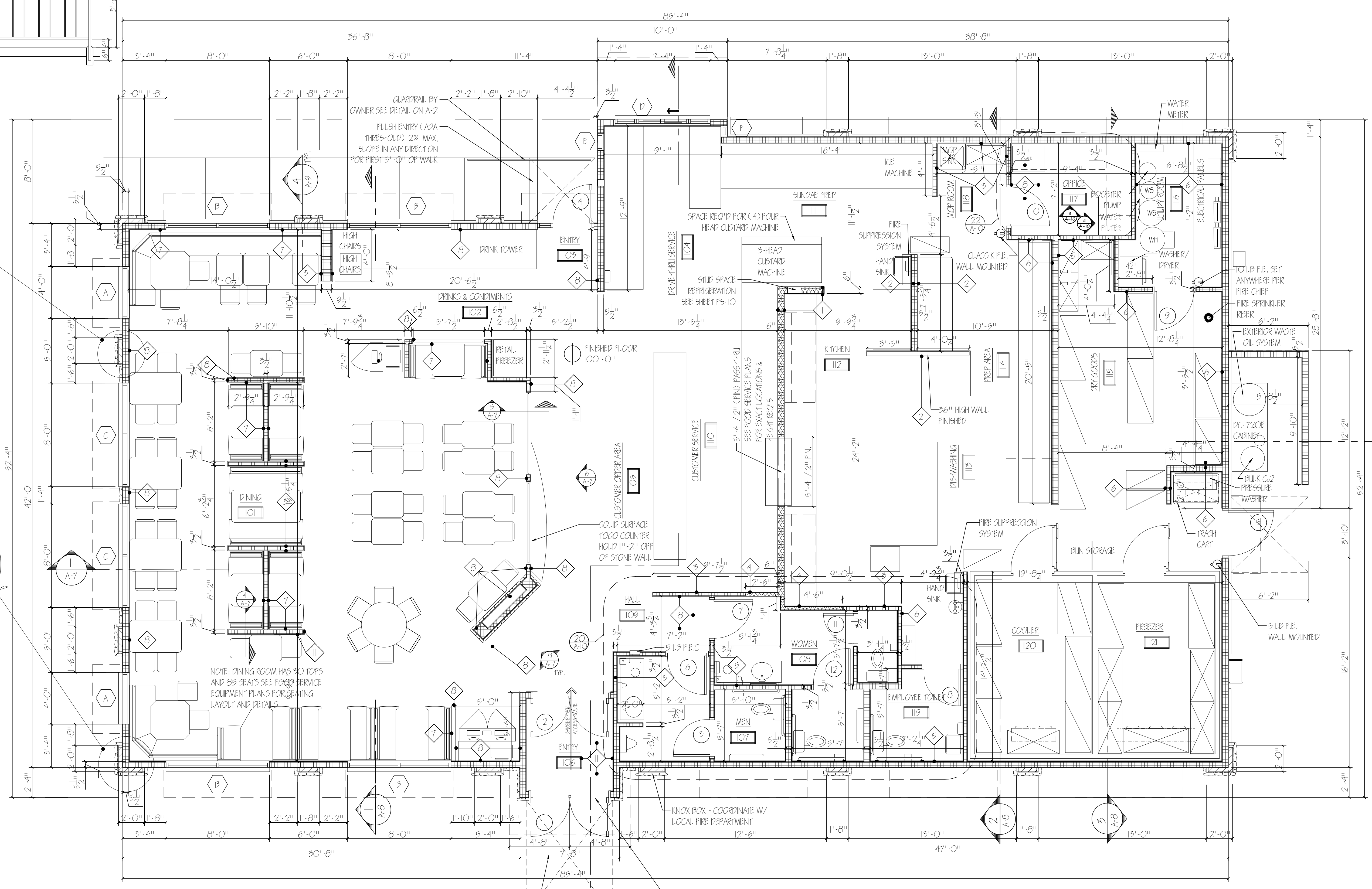
FIRE EXTINGUISHERS SHOWN IN ASSUMED LOCATIONS. LOCAL A/E TO CONFIRM NUMBER, TYPE, & LOCATION REQUIRED PER CODE AND CONFIRM W/ LOCAL FIRE MARSHALL.

**WALL TYPE:**

1	6" 18GA. STEEL STUDS W/ 5/8" CEMENT BOARD FROM FLOOR TO 6" ABOVE CEILING.	6	5/8" CEMENT BOARD FROM FLOOR TO 12" A.F.F. 5/8" PLYWOOD IN LIEU OF GYP. BOARD FROM 4'-0" TO 8'-0" ABOVE FLOOR. GYP. BOARD TO 6" ABOVE CEILING.
2	5/8" CEMENT BOARD FROM FLOOR TO 12" A.F.F. WITH 5/8" PLYWOOD FROM 12" A.F.F. TO FULL HEIGHT.	7	5/8" PLYWOOD FROM FLOOR TO TOP OF WAINSCOT. GULLED & SCREWED. 5/8" GYP. BOARD FROM TOP OF WAINSCOT TO 6" ABOVE CEILING WHERE APPLICABLE.
3	5/8" CEMENT BOARD FROM FLOOR TO 6" ABOVE CEILING.	8	5/8" CEMENT BOARD FROM FLOOR TO 12" A.F.F. 5/8" GYP. BOARD FROM 12" TO 6" ABOVE CEILING WHERE APPLICABLE.
4	3 3/8" STEEL STUDS W/ 5/8" CEMENT BOARD FROM FLOOR TO 6" ABOVE CEILING.		
5	5/8" CEMENT BOARD / 5/8" MOISTURE RESISTANT GYP. BOARD TO ROOF DECK. (COORDINATE WITH INTERIOR FINISHES)		

**KEY TO SYMBOLS**

(XX)	DOOR TYPE - SEE SHEET A-3
(XX)	WINDOW TYPE - SEE SHEET A-3
(XX)	WALL TYPES



**FLOOR PLAN - METRO M - 2015 PROTOTYPE**  
SCALE: 1/4" = 1'-0"  
3,954 SQUARE FEET

**PRELIMINARY NO FOR CONSTRUCTION**

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Date	Revision
06-01-2015	FOR SITE PLAN APPROVAL
06-25-2015	REVISED PER TWP. REVIEW

Sheet  
**A-2**  
of Twelve

**ARCHITECTURAL CONCEPTS**  
ARCHITECTURE  
PLANNING  
ENGINEERING

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GRAND RAPIDS, MI 49508  
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FAX (616) 554-1225

**Culver**  
Franchising  
System, Inc.  
540 Water Street  
Prairie du Sac, WI 53578  
608-643-7980

**CULVER'S RESTAURANT**  
GRAND RIVER AVENUE  
GENOA TOWNSHIP, MI

# DOOR SCHEDULE

DOOR NO.	DOOR:				FRAME:		HARDWARE GROUP	NOTES
	WIDTH	HGT.	MAT'L	TYPE	MATERIAL	TYPE		
1	2 @ 36"	84"	ALUM	A	ALUM	A	1	
2	2 @ 36"	84"	ALUM	A	ALUM	B	2	
3	34"	60"	WD	E	HM	E, 3'-2"	7	HM FRAME PAINT TO MATCH LAMINATE 2: WILSONART FONTHILL PEAR
4	36"	84"	ALUM	A	ALUM	C	1	
5	42"	84"	HM	B	HM	D	3	
6	36"	84"	WD	C	HM	E	4	HM FRAME PAINT TO MATCH LAMINATE 2: WILSONART FONTHILL PEAR
7	36"	84"	WD	C	HM	E	4	HM FRAME PAINT TO MATCH LAMINATE 2: WILSONART FONTHILL PEAR
8	34"	84"	WD	C	HM	E	6	OPTIONAL - CONFIRM IF EMPLOYEE TOILET IS SELECTED
9	36"	84"	WD	C	HM	E	5	
10	36"	84"	WD	D	HM	E	5	HM FRAME PAINT TO MATCH LAMINATE 2: WILSONART FONTHILL PEAR
11	28"	60"	WD	E	HM	E, 2'-8"	7	HM FRAME PAINT TO MATCH LAMINATE 2: WILSONART FONTHILL PEAR
12	34"	60"	WD	E	HM	E, 3'-2"	7	HM FRAME PAINT TO MATCH LAMINATE 2: WILSONART FONTHILL PEAR

## HARDWARE GROUPS:

**HARDWARE GROUP 1: (Doors 1 & 4)**  
This hardware group to be provided as part of the aluminum entrance package and shall be manufacturer's best quality system.

- Hinges: Roton continuous hinges with heavy duty hardware
- Lock: Touchair exit device (Van Duprin Series 98 or approved equal)
- Bolts: Manufacturer's standard flush bolts
- Closers: LCN 4000 series with heavy duty hardware
- Threshold: Aluminum - Meets ADA requirements
- Sweep: MiPar's standard sweep
- Weatherstripping: MiPar's premium package
- Wall stops

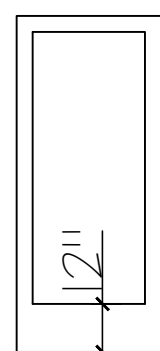
**HARDWARE GROUP 2: (Door 2)**  
This hardware group to be provided as part of the aluminum entrance package and shall be manufacturer's best quality system.

- Hinges: Roton continuous hinges with heavy duty hardware
- Lock: None
- Bolts: None
- Closers: LCN 4000 Series with heavy duty hardware
- Threshold: None
- Sweep: None
- Weatherstripping: None

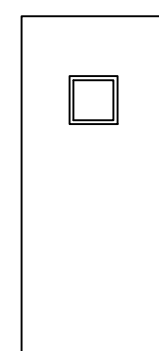
**HARDWARE GROUP 3: (Door 5)**

- Hinges: 1-1/2 pair butts Soss 55 4B 450 TRB NRP (or Stanley or Haeger equal)
- Lock: Schlage D series "Rhodes" in 626 finish
- Lock Protector: Alum-Johnson U532D - Coord. w/ lock
- Closers: LCN 4000 H Cush w/ Integral stop
- Threshold: Pemko 254 Series
- Weatherstripping: Full - Pemko or equal
- Kick Plate: 12" high x door width @ both sides of door. 626 finish - Rockwood or equal.

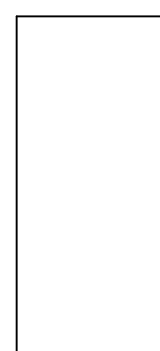
## DOOR TYPES



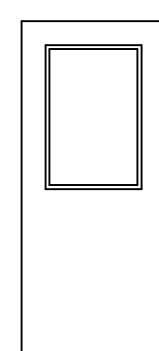
**TYPE "A"**  
36" x 84" clear anodized aluminum finish, glass is 5/8" tempered insulating glass pair @ door 1 single leaf @ door 2



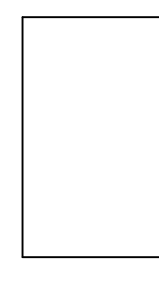
**TYPE "B"**  
42" x 84" insulated hm door w/ 12" x 12" tempered glass like glaze w/ 5/8" insulating glass finish to match adjacent exterior field color



**TYPE "C"**  
36" x 84" x 1-3/4" flush panel solid core w/ maple veneer, finish to match laminate 2 alternate: marlite pre finished door

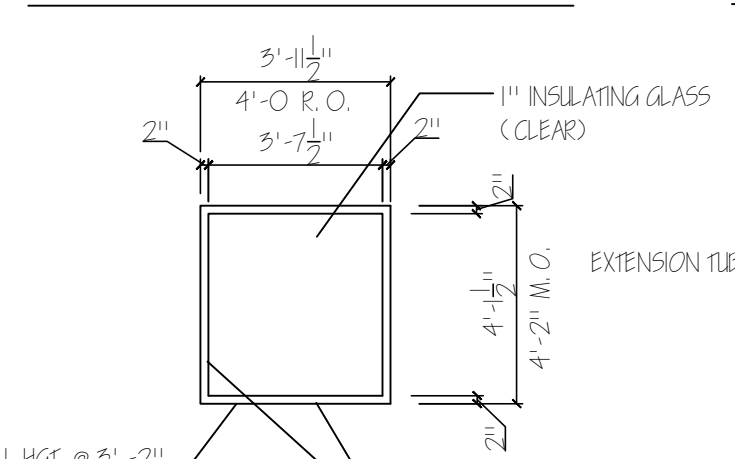


**TYPE "D"**  
36" x 84" insulated hm door w/ single pane 1/4" tempered lite

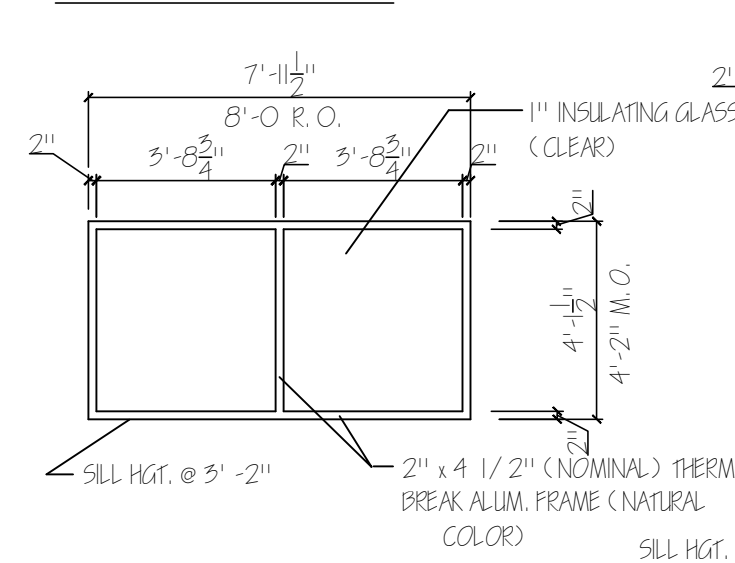


**TYPE "E"**  
See Door Schedule for width. 60" x 1-3/4" flush panel solid core w/ maple veneer, finish to match laminate 2 alternate: marlite pre finished door

## WINDOW TYPES:

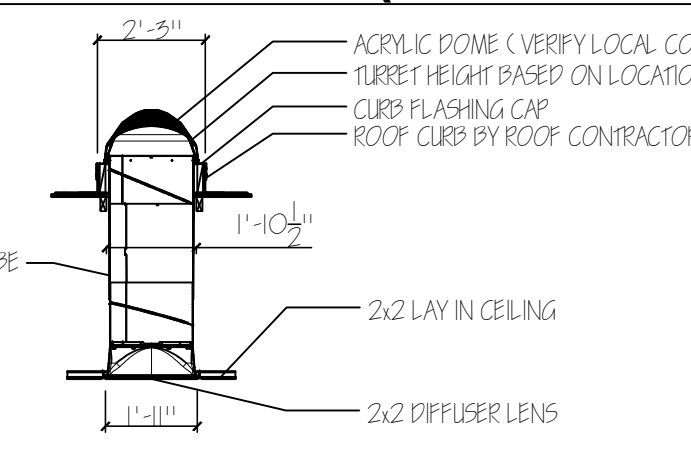


**WINDOW TYPE "A"**

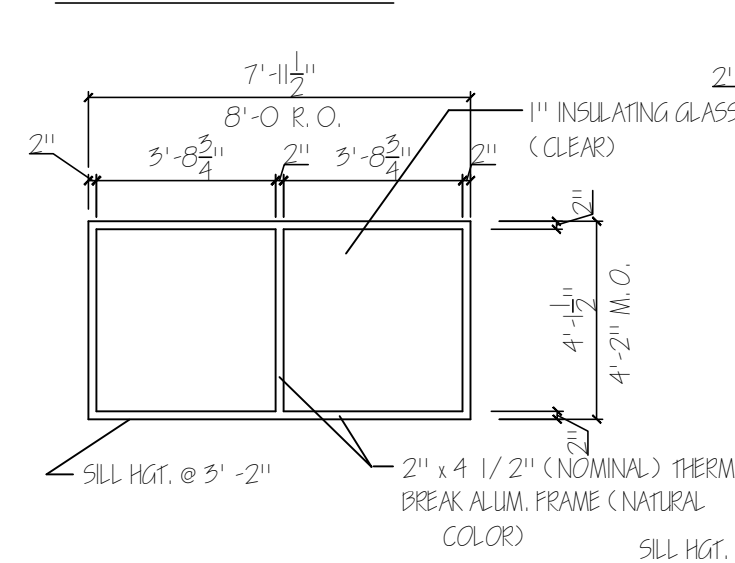


**WINDOW TYPE "B"**

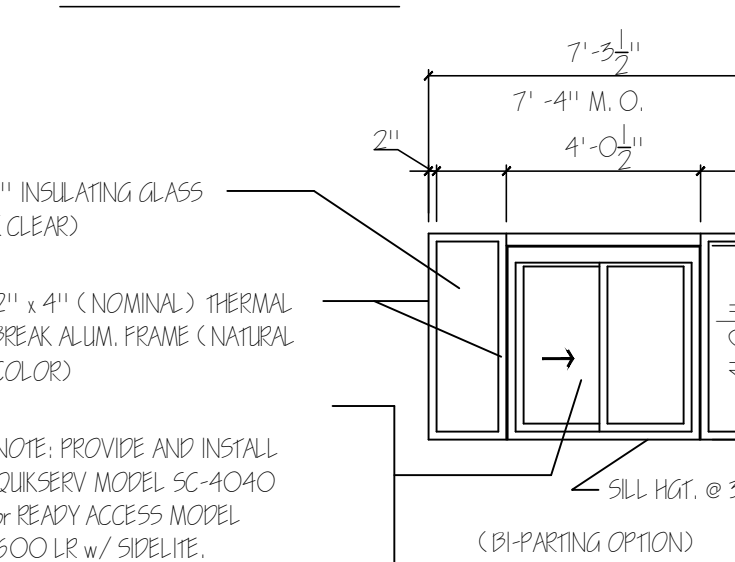
## SKYLIGHT: (OPTIONAL)



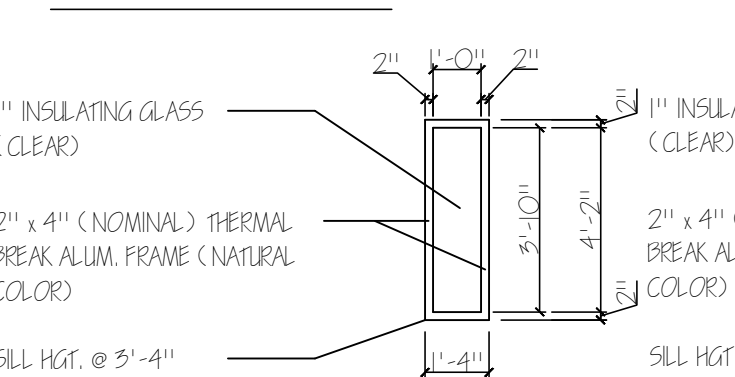
**SKYLIGHT: (OPTIONAL)**



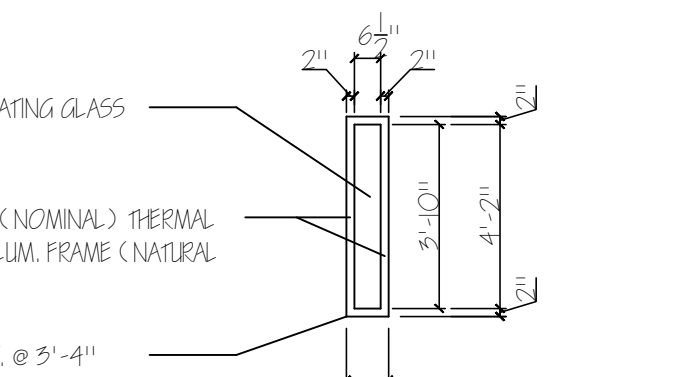
**WINDOW TYPE "C"**



**WINDOW TYPE "D"**

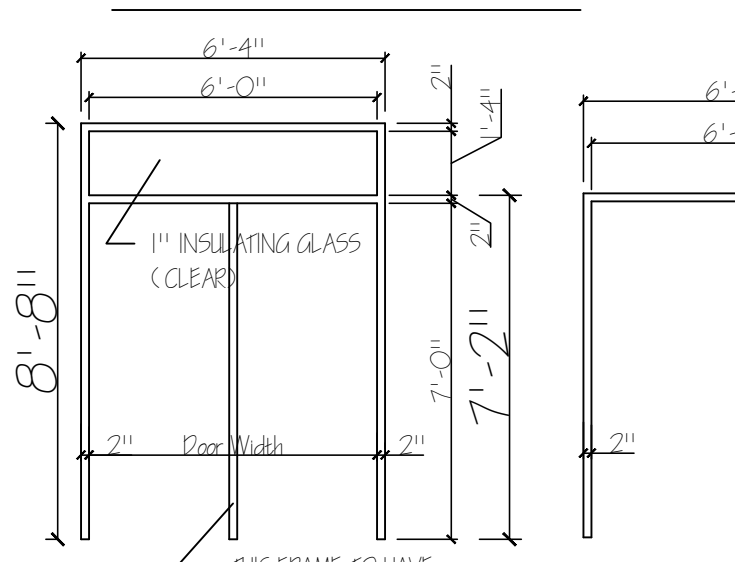


**WINDOW TYPE "E"**

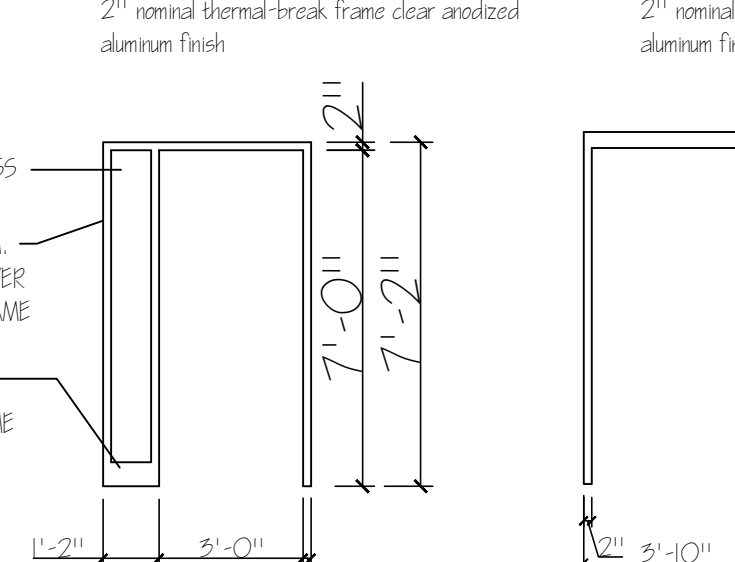


**WINDOW TYPE "F"**

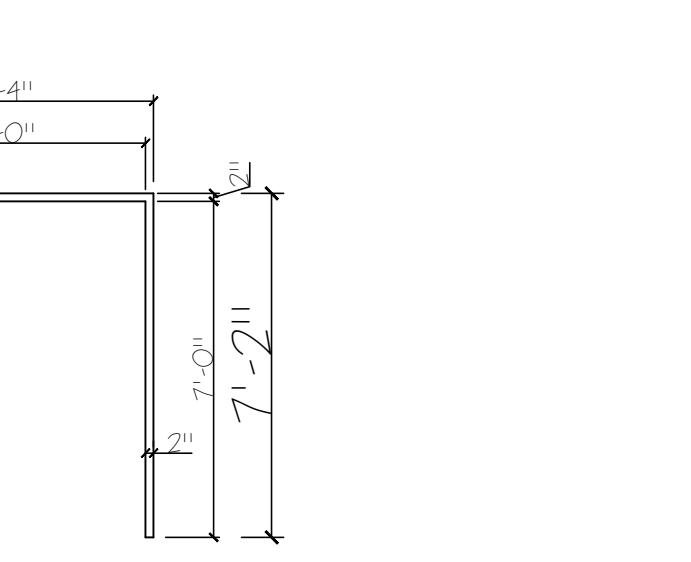
## FRAME TYPES



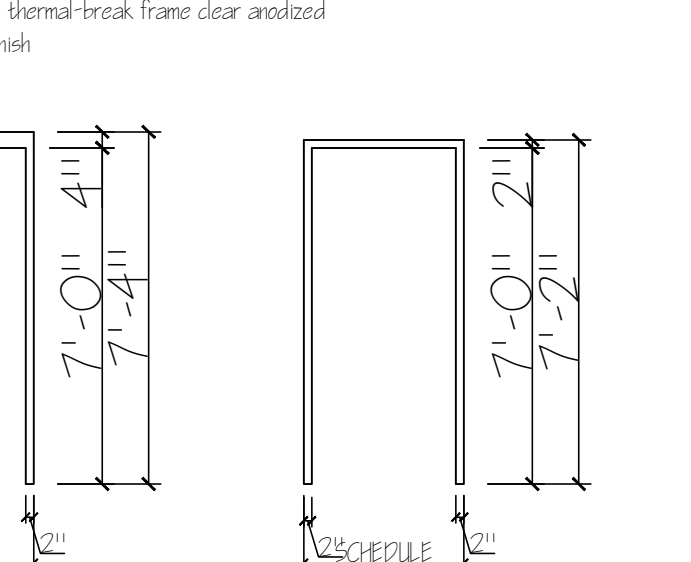
**FRAME "A"**



**FRAME "B"**



**FRAME "C"**



**FRAME "D"**

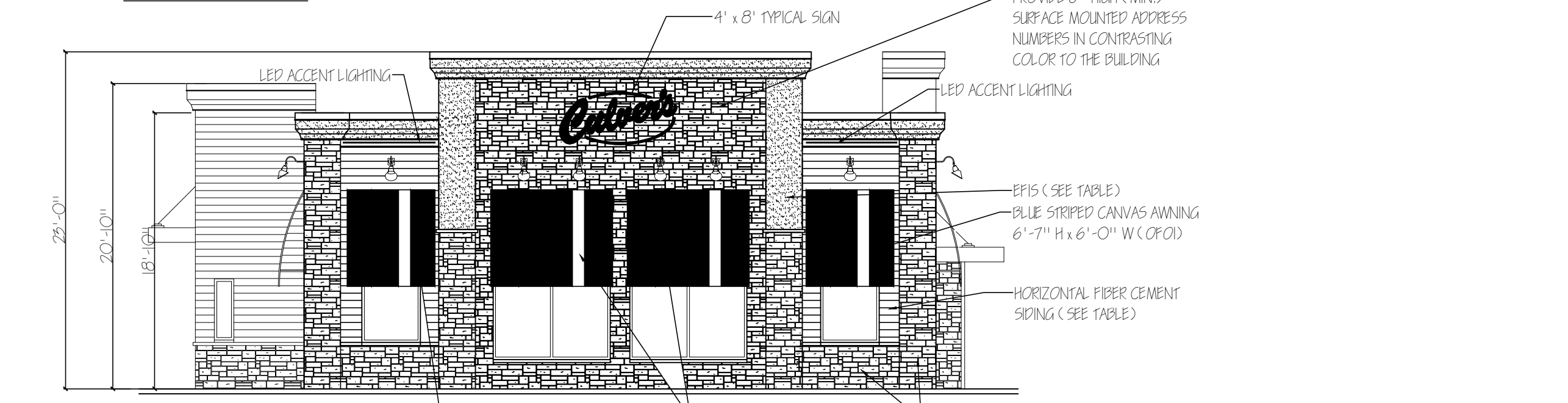
- General Notes:**
- TOP OF PARAPET TO BE CLAD WITH LINA-CLAD STEEL, REGAL BLUE OR PAC CLAD STEEL, MEDIUM BRONZE FOR ALL OPTIONS
  - DO NOT DRYSTACK CULTURED STONE

- STONE:**
- ENVIRONMENTAL STONWORKS: TUSCAN LEDGE - MANZANITA
  - SILL & ACCESSORIES: ENVIRONMENTAL STONWORKS, MARSH
- PLASTER & CORNICES:**
- EIFS: PAREX, FINE SAND FINISH, COLOR TO MATCH SHERWIN WILLIAMS SW7925 TREE BRANCH
- MAIN FIELD MATERIAL:**
- FIBER CEMENT BOARD SIDING, JAMES HARDIE, HARDEPLANK LAP SIDING, COLOR: KHAKI BROWN
- OR:**
- EIFS: PAREX, FINE SAND FINISH, COLOR TO MATCH SHERWIN WILLIAMS SW7925 TONY TAUPE



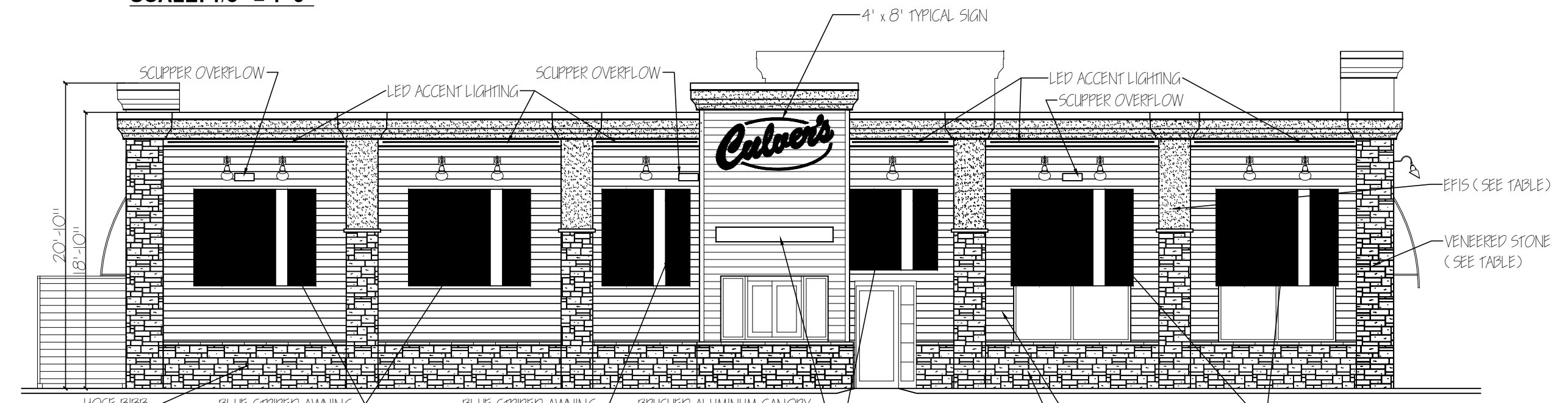
## WEST ELEVATION

SCALE: 1/8" = 1'-0"



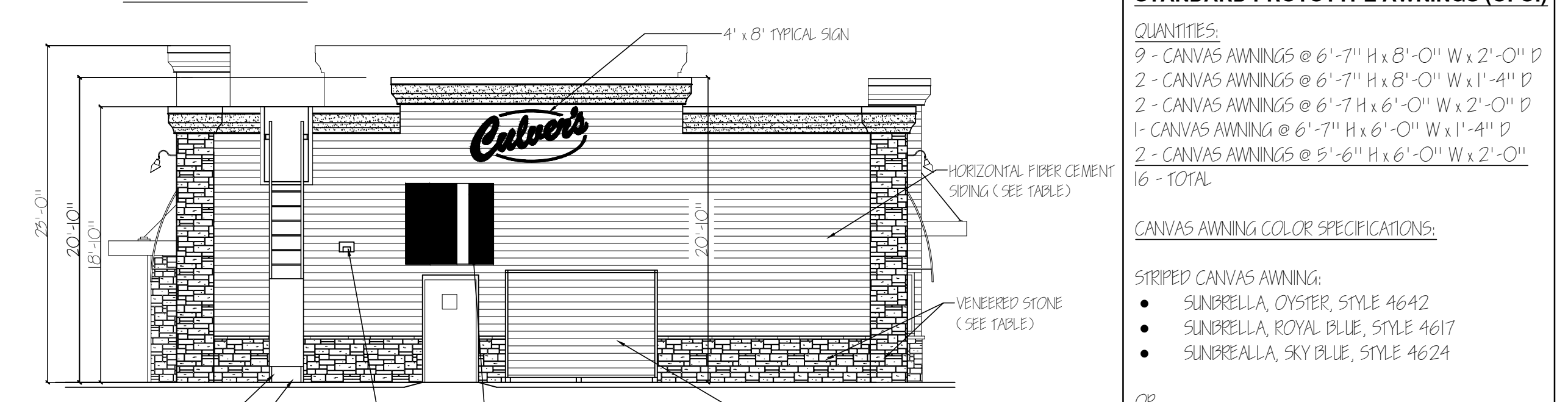
## NORTH ELEVATION

SCALE: 1/8" = 1'-0"



## EAST ELEVATION

SCALE: 1/8" = 1'-0"



## SOUTH ELEVATION

SCALE: 1/8" = 1'-0"

### STANDARD PROTOTYPE AWNINGS (OFOI)

- QUANTITIES:**
- 9 - CANVAS AWNINGS @ 6'-7" H x 8'-0" W x 2'-0" D
  - 2 - CANVAS AWNINGS @ 6'-7" H x 8'-0" W x 1'-4" D
  - 2 - CANVAS AWNINGS @ 6'-7" H x 6'-0" W x 2'-0" D
  - 1 - CANVAS AWNING @ 6'-7" H x 6'-0" W x 1'-4" D
  - 2 - CANVAS AWNINGS @ 5'-6" H x 6'-0" W x 2'-0" D
- 16 - TOTAL

### CANVAS AWNING COLOR SPECIFICATIONS:

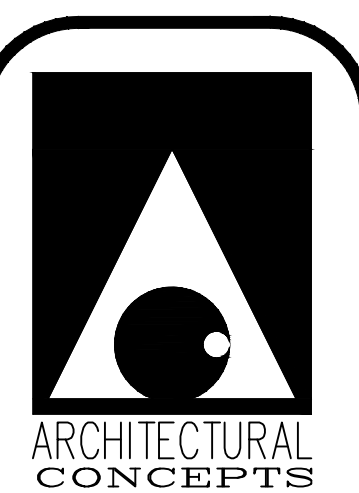
- STRIPED CANVAS AWNING:**
- SUNBRELLA, OYSTER, STYLE 4642
  - SUNBRELLA, ROYAL BLUE, STYLE 4617
  - SUNBRELLA, SKY BLUE, STYLE 4624

OR

- SOLID CANVAS AWNING:**
- SUNBRELLA, ROYAL BLUE, STYLE 4617

**PRELIMINARY NO FOR CONSTRUCTION**

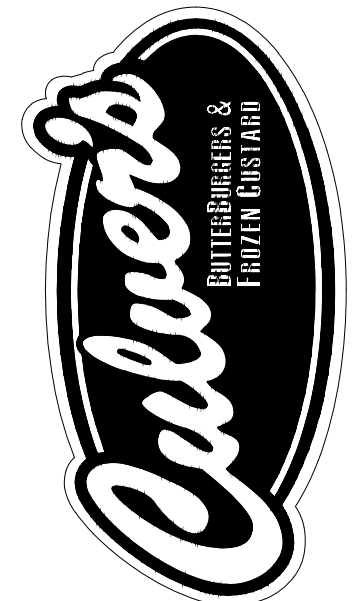
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ARCHITECTURE  
PLANNING  
ENGINEERING

6650 CROSSING DRIVE, S.E.  
GRAND RAPIDS, MI 49508  
(616) 554-1222  
FAX (616) 554-1225

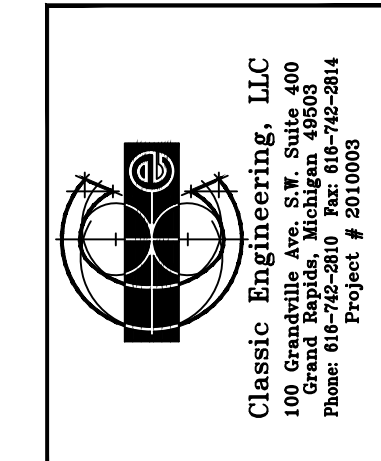
Culver Franchising  
System, Inc.  
540 Water Street  
Prairie du Sac, WI 53578  
608-643-7980



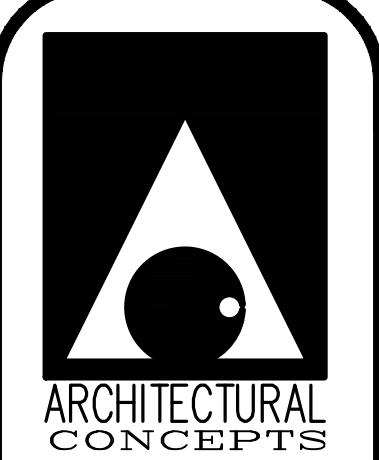
**CULVER'S RESTAURANT**  
**GRAND RIVER AVENUE**  
**GENOA TOWNSHIP, MI**

Date	Revision
06-01-2015	FOR SITE PLAN APPROVAL
06-25-2015	REVISED PER TWP. REVIEW

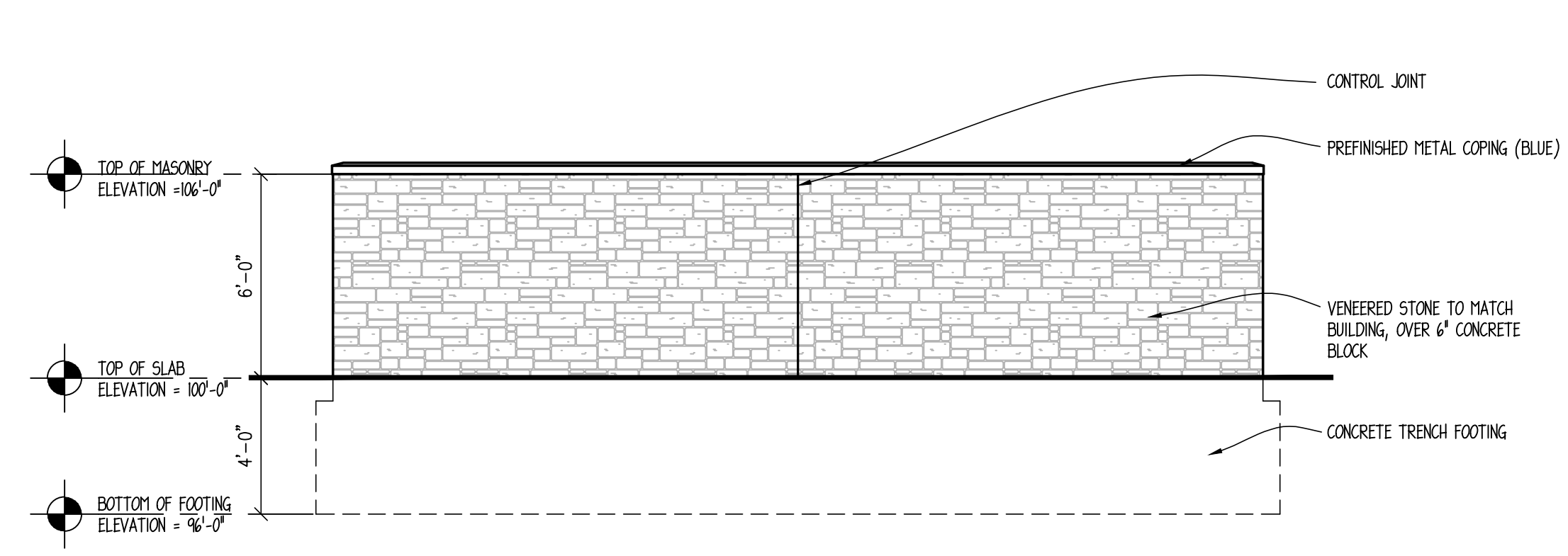
Sheet  
**A-3**  
of Twelve



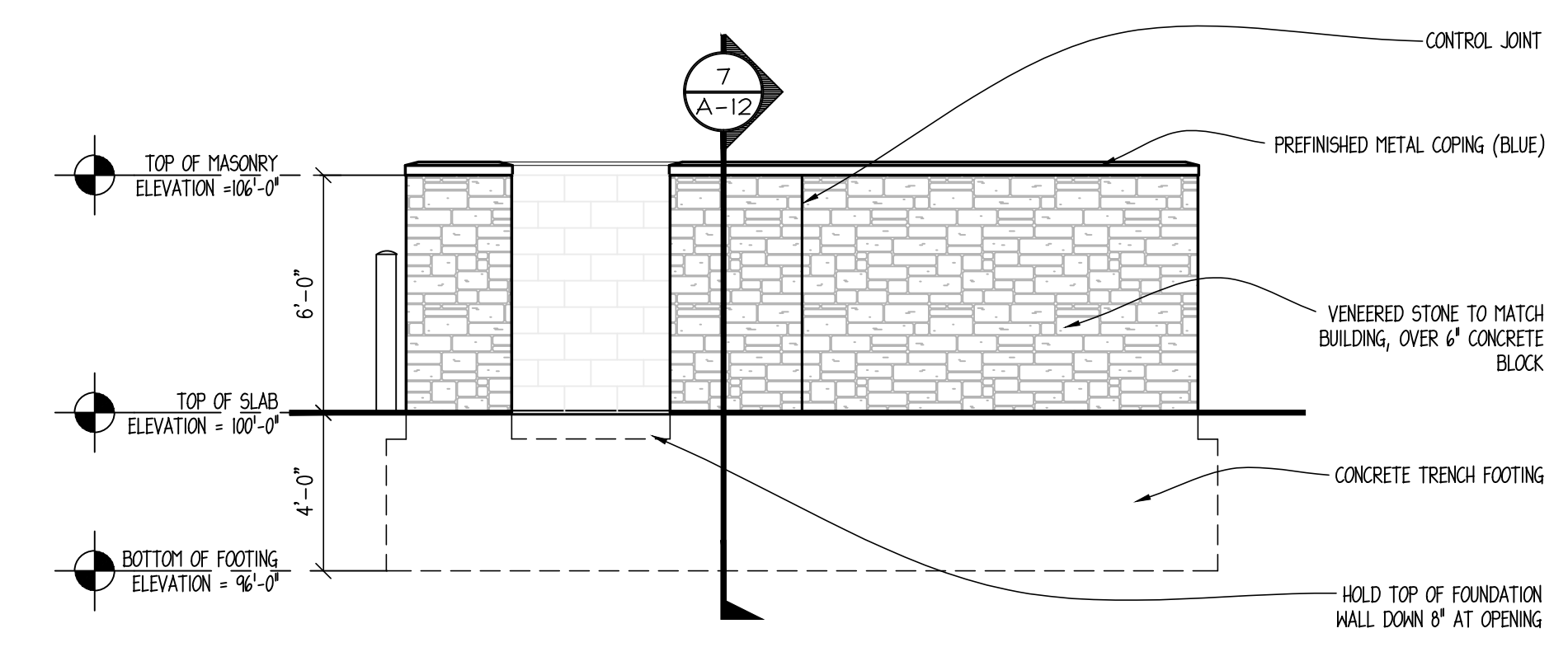
Classic Engineering, LLC  
 100 Grandville Ave., S.W. Suite 400  
 Grand Rapids, MI 49508  
 Phone: 616-742-2814 Fax: 616-742-2814  
 Project # 2010005



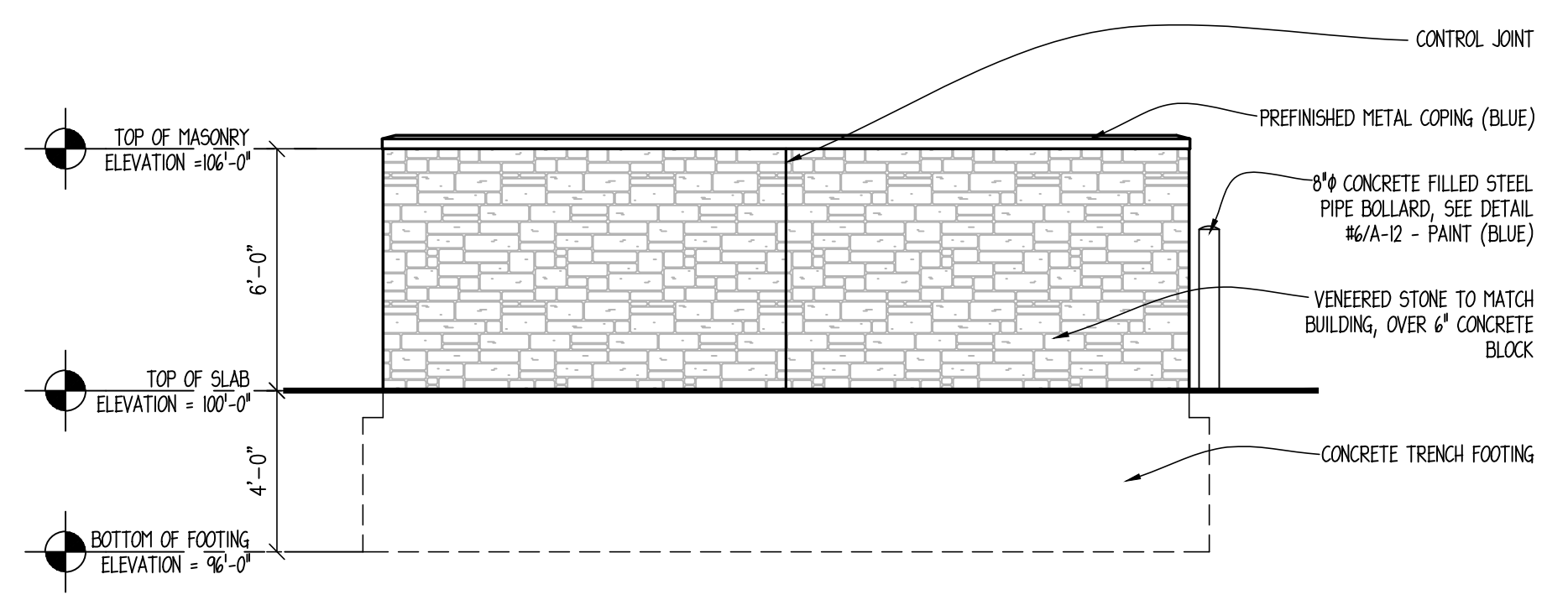
ARCHITECTURAL CONCEPTS  
 ARCHITECTURE PLANNING ENGINEERING  
 6650 CROSSING DRIVE, S.E.  
 GRAND RAPIDS, MI 49508  
 (616) 554-1222  
 FAX (616) 554-1225



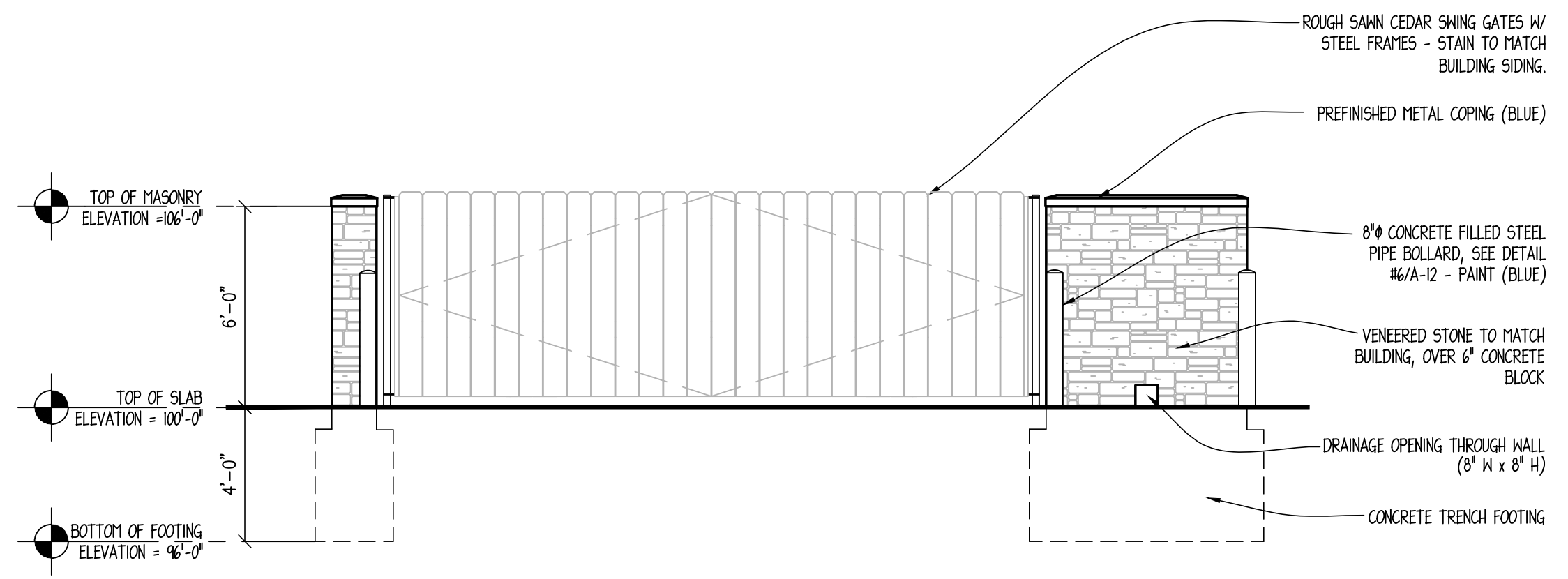
4 WEST ELEVATION  
 A-12 SCALE: 1/4" = 1'-0"



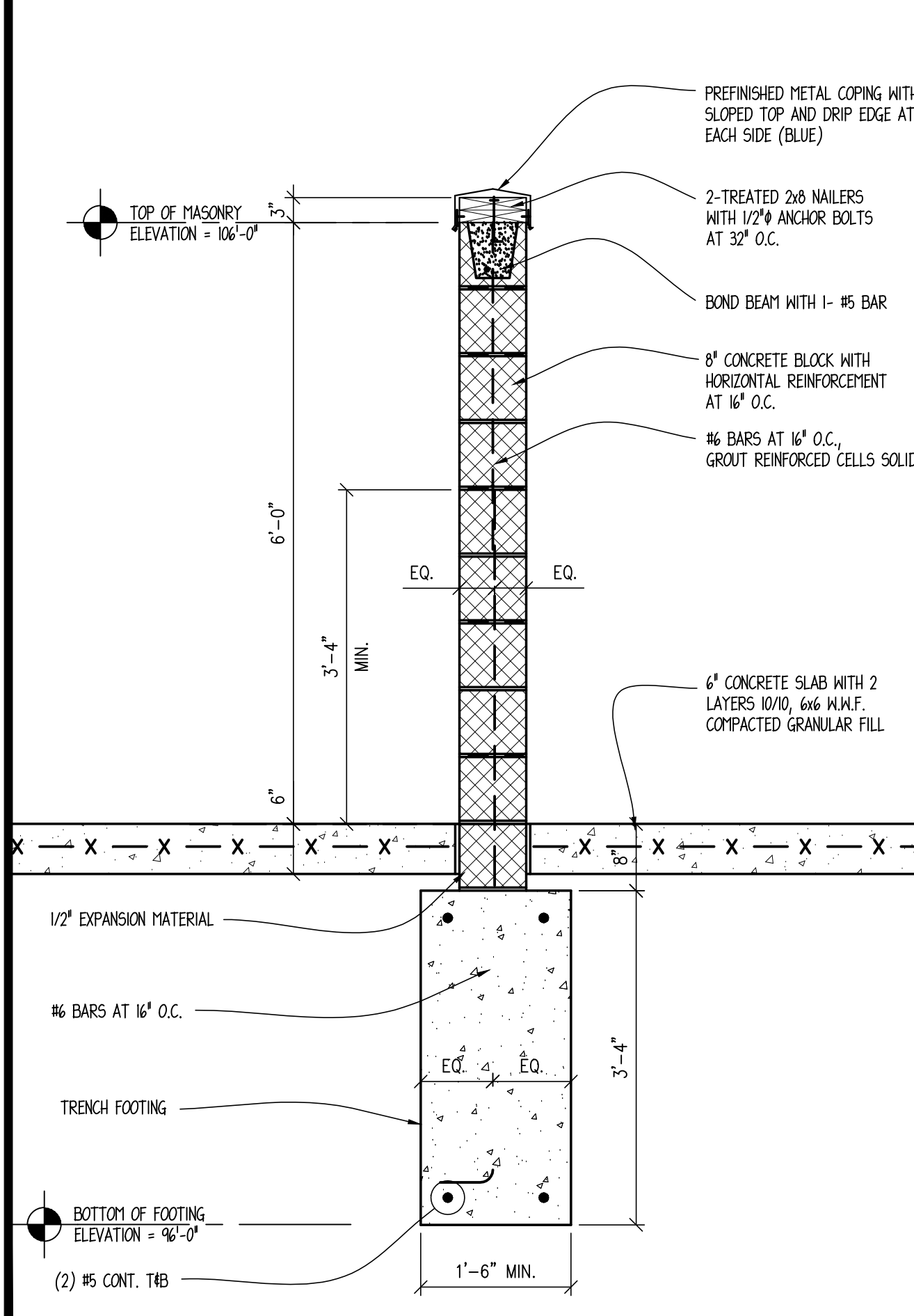
3 NORTH ELEVATION  
 A-12 SCALE: 1/4" = 1'-0"



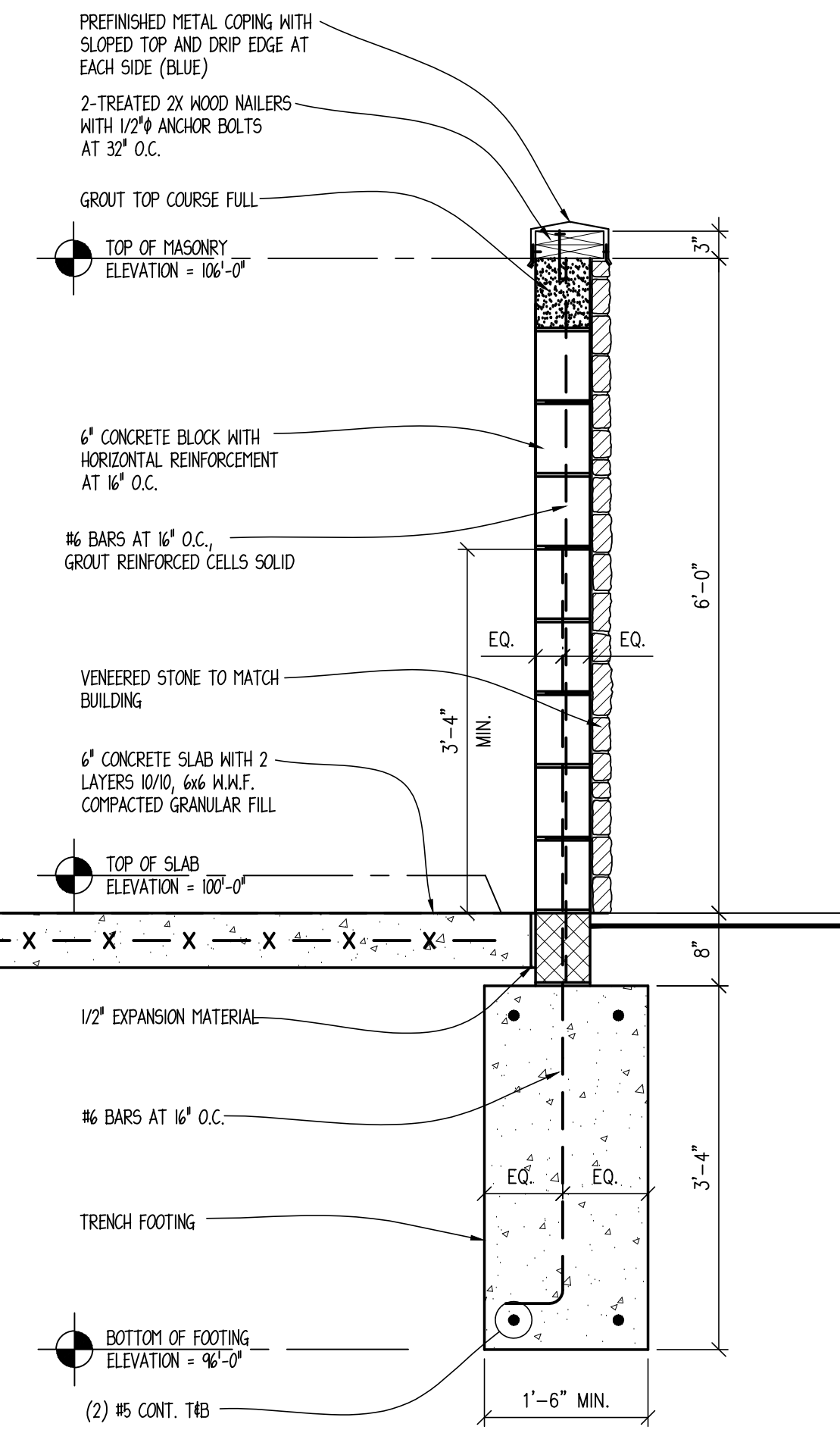
5 SOUTH ELEVATION  
 A-12 SCALE: 1/4" = 1'-0"



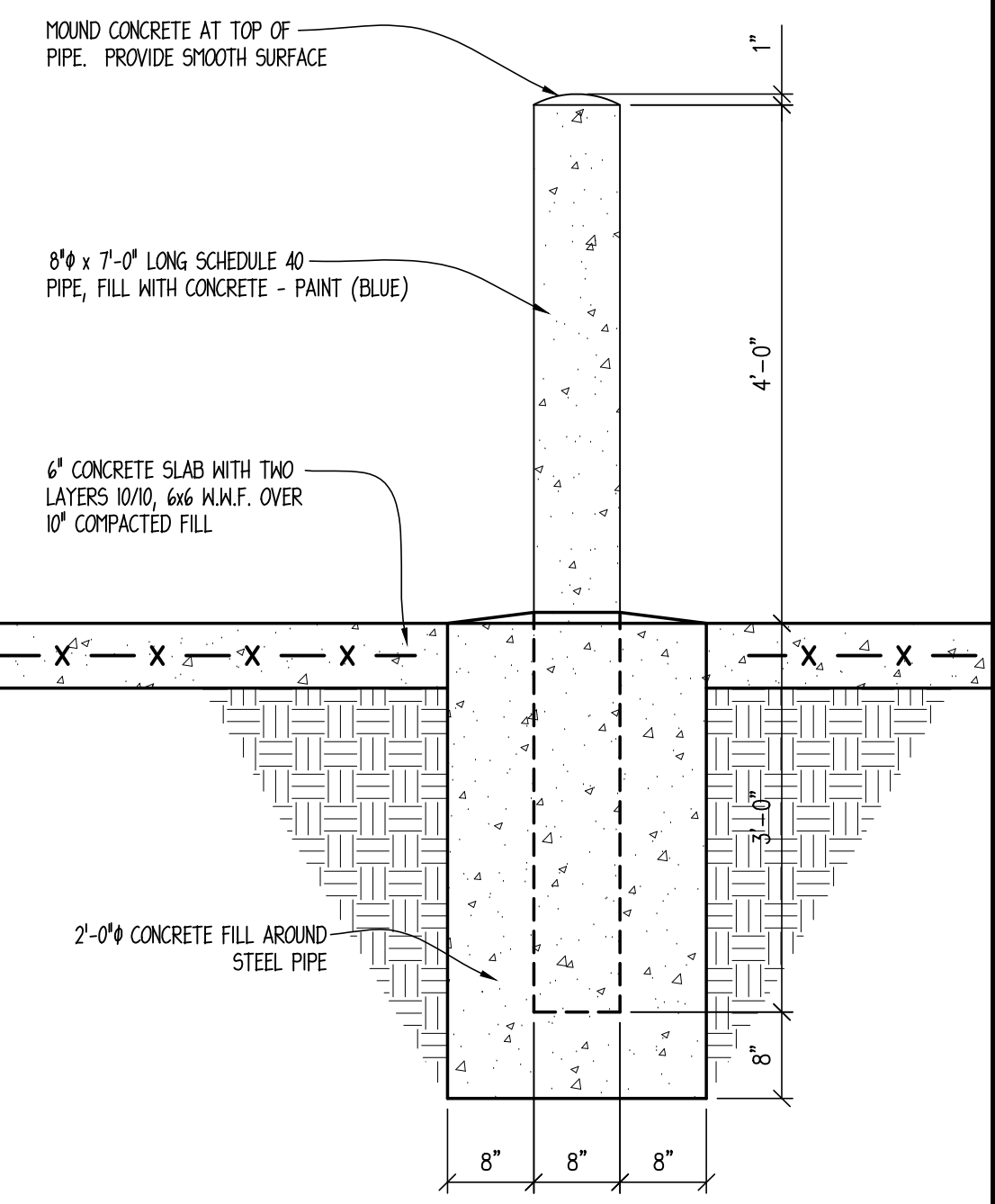
2 EAST ELEVATION  
 A-12 SCALE: 1/4" = 1'-0"



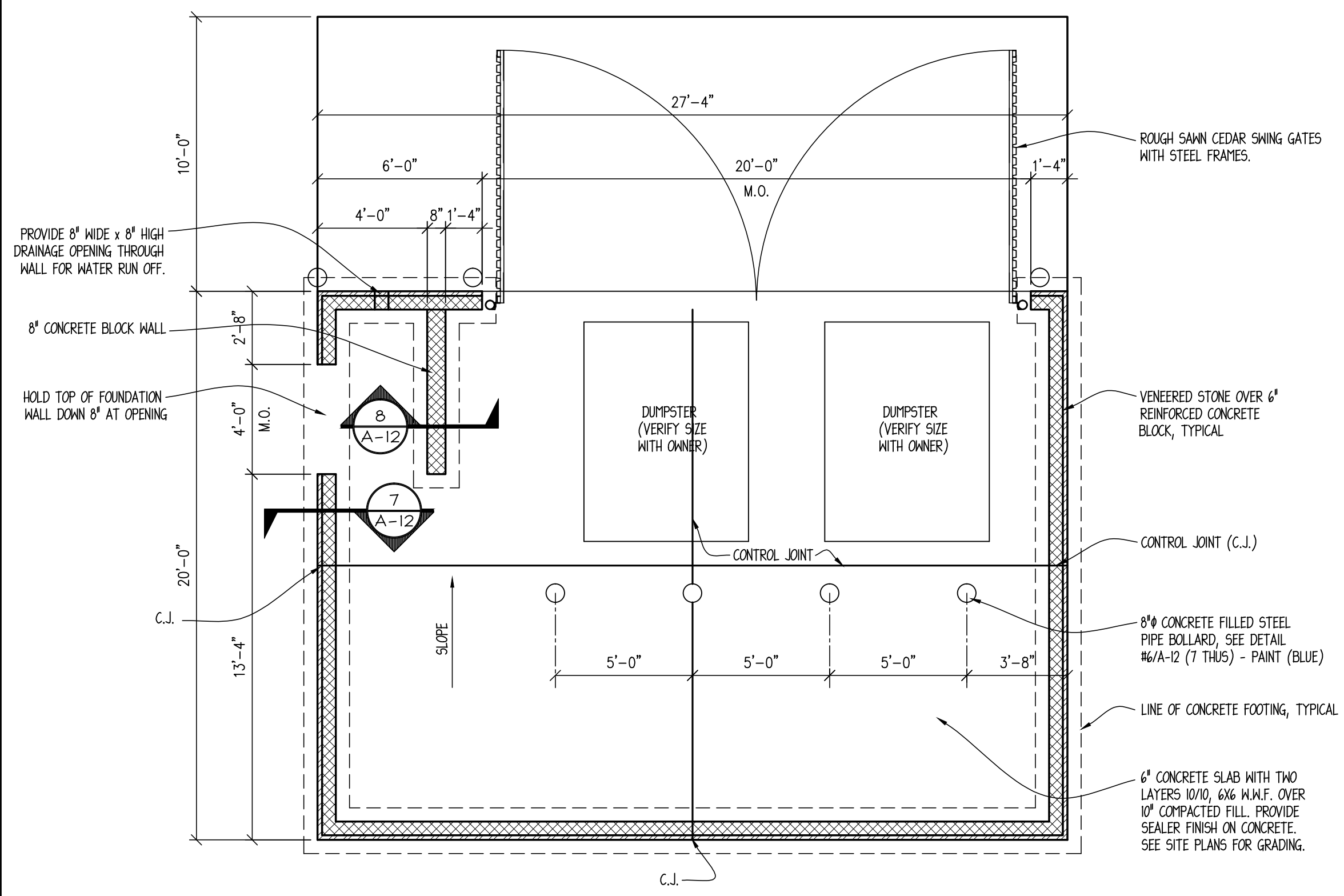
8 WALL SECTION  
 A-12 SCALE: 3/4" = 1'-0"



7 WALL SECTION  
 A-12 SCALE: 3/4" = 1'-0"



6 TYPICAL BOLLARD DETAIL  
 A-12 SCALE: 3/4" = 1'-0"

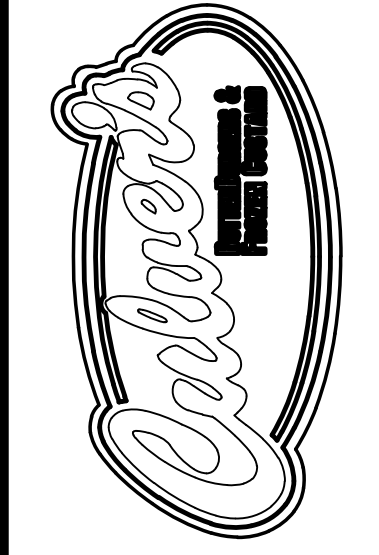


1 DUMPSER ENCLOSURE PLAN  
 A-12 SCALE: 1/4" = 1'-0"

PRELIMINARY NO FOR CONSTRUCTION

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Culver Franchising System, Inc.  
 540 Water Street  
 Prairie du Sac, WI 53578  
 608-643-7980



CULVER'S RESTAURANT  
 GRAND RIVER AVENUE  
 GENOA TOWNSHIP, MI

Revision	Date	Description
06-01-2015	06-25-2015	FOR SITE PLAN APPROVAL REVISED PER TWP. REVIEW

Sheet  
**A-12**  
 of Twelve

CULVERS:

TYPE: M

Note: White color only. Alternate colors will require an additional cost and lead time.

## ABOLITE LED ANGLED REFLECTOR (AD)



Designed and manufactured in the U.S.



Directional Optics



Symmetrical Optics

U.S. Patent D581585 and other U.S. and international patents pending

**APPLICATIONS** - Signage Lighting and Accent Lighting. Interior or Exterior.

**PRODUCT HIGHLIGHTS**

- **"Green" Energy-Saving** - Reduces greenhouse gas emissions, slashes operating costs, extends life and eliminates costly lamp disposal involving mercury waste.
- **Long Lasting Sparkle** - LED light beam contains no heat, and no UV, which means degradation in color or quality of the product under display is minimized.
- **Dramatically Lower Maintenance Costs** - 60,000-hour LED source extends life 3 to 5 times as compared to conventional HID sources, 30 times incandescent.
- **Integrated Power Supply** - Built into fixture allowing RLM to be connected directly to line voltage.

**FINISH** - Available in either architectural textured, high gloss, satin or galvanized finish.

**LED** - Select, high brightness LEDs with 60,000 hour life. 5000°K color temperature (nominal).

**MOUNTING** - Fixed hub tapped for 3/4" NPT conduit. Pre-wired with 96" leads.

**REFLECTOR** - Heavy duty spun galvanized steel construction with either polyester powder coat or galvanized finish.

**ELECTRICAL** - Integral power supply operates on 120-240 VAC (50/60Hz) input; no external power supplies required.

**LIGHT OUTPUT** - 700 lumens with an input power of 10 watts.

**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F).

**DRIVER** - State-of-the-Art driver designed specifically for RLM fixtures provides unsurpassed system efficiency. Components are fully encased in potting material for moisture resistance. Driver complies with IEC and FCC standards.

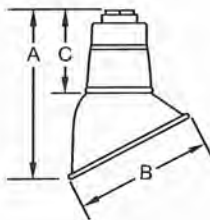
**OPTIONAL DIRECTIONAL OPTICS** - Allows field adjustment of the light beam for directional illumination of signage.

**LISTING** - Listed to U.S. and Canadian safety standards. Suitable for wet locations.



Suitable for wet locations

**DIMENSIONS**



Prefix	Height (A)	Diameter (B)	Neck (C)	Weight (lbs./kg)
AD 100	10" (254mm)	7" (178mm)	5" (127mm)	2.0 (.9kg)
AD 150	11-1/2" (292mm)	9" (229mm)	5-1/4" (133mm)	2.0 (.9kg)
AD 200	13-1/2" (343mm)	11" (279mm)	5-1/2" (140mm)	2.5 (1.1kg)

# ABOLITE LED ANGLED REFLECTOR (AD)



## LUMINAIRE ORDERING INFORMATION

SPECIAL BRACKET

TYPICAL ORDER EXAMPLE: **AD 200 10 CW LED UE** GWT **LDS96 WL DO** 414139GWT-SPL-GB-3-GWT

Prefix	Qty. LED's	Color Temp.	Light Source	Line Voltage	Reflector Color	Mounting	Options
AD 100' AD 150' AD 200'	10	CW - Cool White (5000°K)	LED - Light Emitting Diode	UE <sup>2</sup> - Universal Electronic (120-240)	MSV-Metallic Silver GWT-Gloss White GBK-Gloss Black GRD-Gloss Red GGN-Gloss Green GPT-Textured Graphite RUS-Textured Rust SCP-Satin Copper STO-Satin Turquoise SVG-Satin Verde Green GAL-Galvanized	LDS96 WL - Factory prewired leads for use with stem or bracket mounting	DO - Directional Optics

- 1- Cordsets not available for AD Series.
- 2- Fixture will not operate on 277VAC (120-240 only).

CANOPY ORDERING INFORMATION (Accessories are field installed)	
Description	Order Number
3/4" (19mm) Tap Decorative Box Cover Aligner - Gloss White	BC600 3 GWT
3/4" (19mm) Tap Round Box Cover Aligner - Zinc	BC585 ZINC
3/4" (19mm) Tap Square Box Cover Aligner - Zinc	BC585SQ ZINC

- Standard BC600 finish is Gloss White Powder; other RLM colors available.
- Best color match for use with galvanized RLMs is Metallic Silver (MSV)

WIRE GUARD ORDERING INFORMATION (Accessories are field installed)	
Description	Order Number
7" (178mm) Convex Wire Guard - Metallic Silver	COG 7 MSV
9" (229mm) Convex Wire Guard - Metallic Silver	COG 9 MSV
11" (279mm) Convex Wire Guard - Metallic Silver	COG 11 MSV

- Standard finish is Metallic Silver Powder; other RLM colors available.
- Best color match for use with galvanized RLMs is Metallic Silver (MSV)

CONDUIT SYSTEM ORDERING INFORMATION (Accessories are field installed)	
Description	Order Number
3/4" x 3" (19mm x 76mm) Aluminum Stem - Gloss White	ST 3 3 GWT
3/4" x 6" (19mm x 152mm) Aluminum Stem - Gloss White	ST 6 3 GWT
3/4" x 12" (19mm x 4m) Aluminum Stem - Gloss White	ST 12 3 GWT
3/4" x 18" (19mm x .5m) Aluminum Stem - Gloss White	ST 18 3 GWT
3/4" x 24" (19mm x .6m) Aluminum Stem - Gloss White	ST 24 3 GWT
3/4" x 36" (19mm x .9m) Aluminum Stem - Gloss White	ST 36 3 GWT
3/4" x 48" (19mm x 1.2m) Aluminum Stem - Gloss White	ST 48 3 GWT
3/4" x 60" (19mm x 1.5m) Aluminum Stem - Gloss White	ST 60 3 GWT
3/4" x 72" (19mm x 1.8m) Aluminum Stem - Gloss White	ST 72 3 GWT
3/4" (19mm) Alum. Stem Coupler - Gloss White	COP 3 GWT

- Standard finish is Gloss White Powder; other RLM colors available.
- Best color match for use with galvanized RLMs is Metallic Silver (MSV)

GOOSE NECK BRACKET ORDERING INFORMATION (Accessories are field installed)	
Description	Order Number
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB A 3 GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB B 3 GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB C 3 GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB D 3 GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB E 3 GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB F 3 GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB G 3 GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB H 3 GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB J 3 GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB K 3 GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB P 3 GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB U 3 GWT

WALL BRACKETS ORDERING INFORMATION (Accessories are field installed)	
Description	Order Number
Contemporary Wall Bracket - Medium - Gloss White	CWBM 1 GWT
Contemporary Wall Bracket - Long - Gloss White	CWBL 1 GWT
Nostalgic Aluminum Wall Scroll Bracket - Gloss White	DWB 1 GWT

### BRACKETS

- See Buyers Guide for detail on bracket sizes and shapes.
- Standard finish is Gloss White Powder; colors available.
- Best color match for use with galvanized RLMs is Metallic Silver (MSV)
- Designed for mounting to recessed 4" (102mm) octagon box (by others).

02/27/09

© 2009  
LSI INDUSTRIES INC.

Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_  
Catalog # \_\_\_\_\_



Submitted by Enterprise Lighting, LTD.



Enterprise Lighting Ltd  
Manufacturers Representatives

Job Name:

Culvers

Catalog Number:  
LM10C WY/FC/CO

Notes: includes lamp

Type:

P

ELL09-4294

## C PER LIGHTING - LUMARK®

### DESCRIPTION

Lumark's Cutoff Wally is a cutoff classified wall luminaire. Combining compact and aerodynamic styling with higher wattage performance, it is ideal for areas where spill light and glare control must be managed effectively. U.L. Listed for wet locations.

Catalog #		Type
Project		
Comments		Date
Prepared by		

### SPECIFICATION FEATURES

#### A ... Housing

Die-cast aluminum housing finished standard bronze polyester powder coat.

#### B ... Socket

HID: 4Kv medium-base socket.  
CFL: GX24q-4 (4-pin)

#### C ... Lamp

HID: Medium-base lamp included and available, up to 150W High Pressure Sodium or 100W Pulse Start Metal Halide.  
CFL: Supplied with 4-pin, 42W Compact Fluorescent lamp.

#### D ... Door

Special one-piece door design held in place with slot-head captive screws, provides lowglare cutoff lighting. Silicone gasketing seals out dirt and contaminants.

#### E ... Lens

Patterned tempered glass lens minimizes direct lamp imaging.

#### F ... Mounting

Ships completely prewired and preassembled. Easily mounts to J-box wall for quick installation. (3) 1/2" NPS conduit taps available.

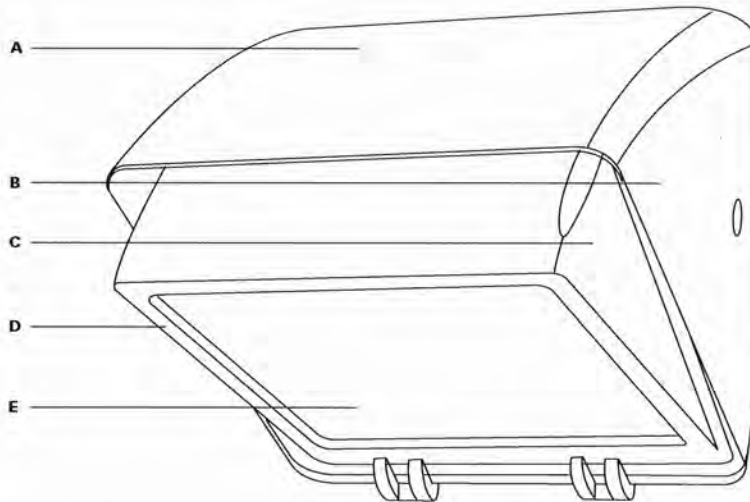


### WALLY CUTOFF

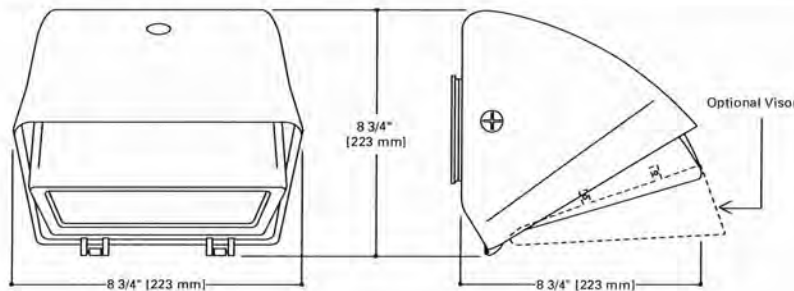
50-150W  
High Pressure Sodium  
70-100W  
Pulse Start Metal Halide  
42W  
Compact Fluorescent

WALL MOUNT  
LUMINAIRE

**DARK SKY** **CO**  
**COMPLIANT** Cutoff



### DIMENSIONS



### TECHNICAL DATA

U.L. Wet Location Listed  
CSA Certified

### ENERGY DATA

#### Reactor Ballast Input Watts

50W HPS NPF (58 Watts)  
70W HPS NPF (82 Watts)  
100W HPS NPF (118 Watts)  
150W HPS NPF (175 Watts)

#### High Reactance Ballast Input Watts

70W MP NPF (92 Watts)  
100W MP NPF (128 Watts)

#### Electronic Ballast Input Watts

42W of Electronic (46 Watts)

### SHIPPING DATA

Approximate Net Weight:

HID: 11 lbs. (5kgs.)  
CFL: 7.1 lbs. (3.23 kgs.)

**COOPER** Lighting  
www.cooperlighting.com

Specifications and Dimensions subject to change without notice.

Consult your representative for additional options and finishes.

ADH082315  
12/29/2008 5:49:42 PM





Job Name:

Culvers

Catalog Number:  
LM10C WY/FC/CO

Notes: includes lamp

Type:

P

ELL09-4294

ORDERING INFORMATION

WALLY CUTOFF

SAMPLE NUMBER: LS50C

Catalog Number	Lamp Type	Lamp Wattage	Ballast Type	Voltage	Net Wt Color
<b>High Pressure Sodium</b>					
LS50C	ED17	50	Reactor/NPF	120V	Bronze
LS70C	ED17	70	Reactor/NPF	120V	Bronze
LS10C	ED17	100	Reactor/NPF	120V	Bronze
LS15C	ED17	150	Reactor/NPF	120V	Bronze
<b>Pulse Start Metal Halide</b>					
LP70C	ED17	70	Hi. Reac/NPF	120-277V	Bronze
LP10C	ED17	100	Hi. Reac/NPF	120-277V	Bronze
<b>Compact Fluorescent</b>					
LC42C	GX24q-4 (4-pin)	42	Electronic	120-277V	Bronze

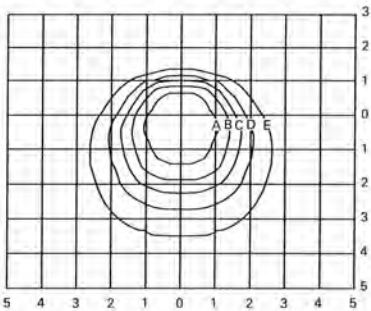
NOTE: Add "W" to the end of catalog number for white finish. Add "WHT" to the end of accessory for white finish (Example: WY/CO-WHT). Not available in 42W CF. In cold temperatures, Compact Fluorescent lamps produce lower illumination levels.

Accessories (order separately)

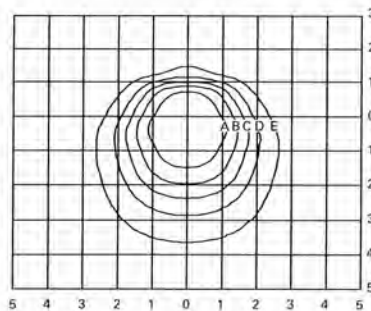
WY/CO=Cutoff Replacement Door (Bronze) (Not available in 42W Compact Fluorescent.)

WY/FC/CO=Full Cutoff Visor for Cutoff (Bronze)

PHOTOMETRICS



LP10C  
100-Watt MP  
9,300-Lumen Clear ED-17 Lamp

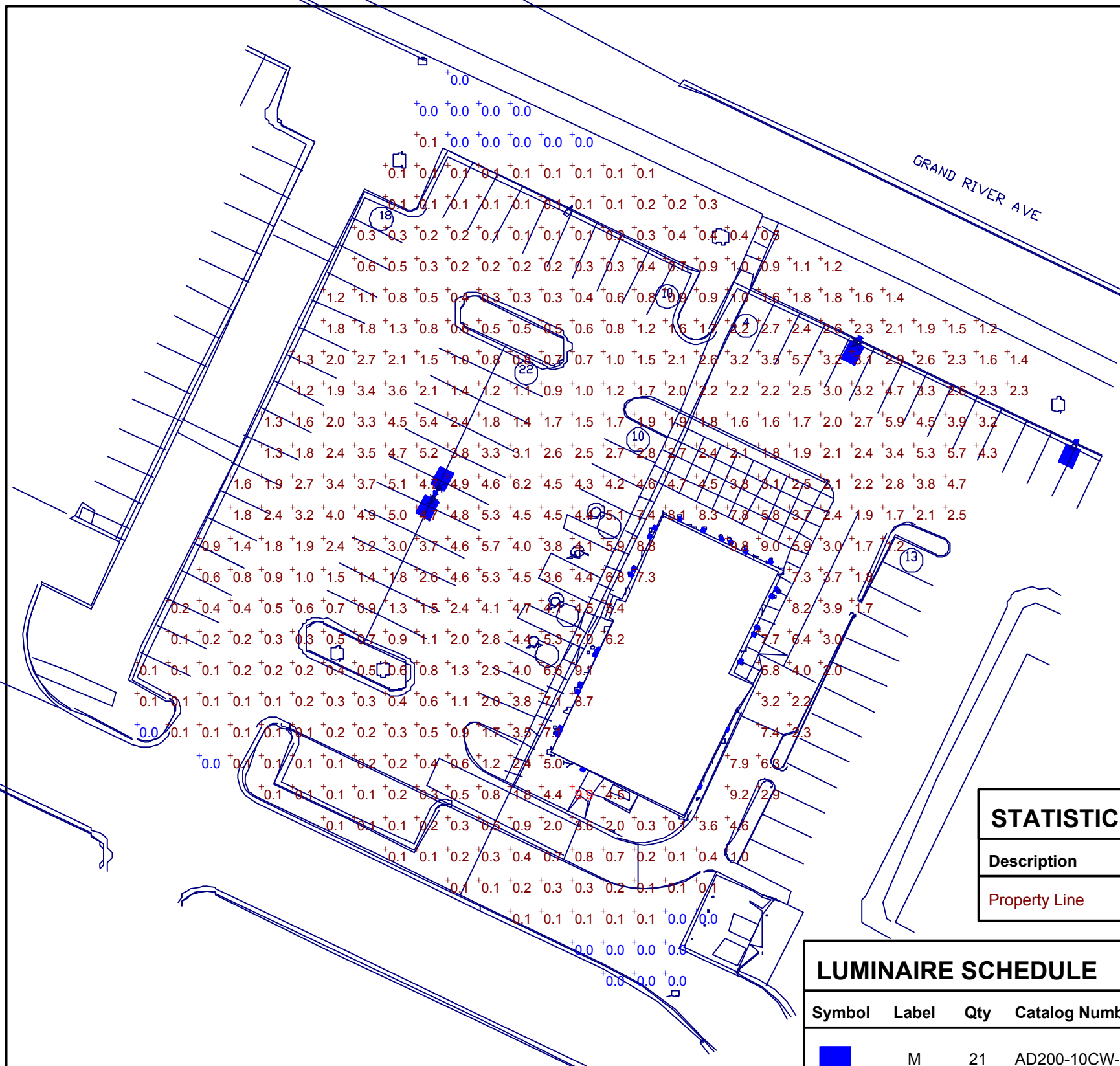


LS15C  
150-Watt HPS  
16,000-Lumen Clear ED-17 Lamp

Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.





Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
10'	2.00	1.00	0.50	0.20	0.10
12'	1.38	0.69	0.34	0.13	0.06
15'	0.88	0.44	0.22	0.08	0.04



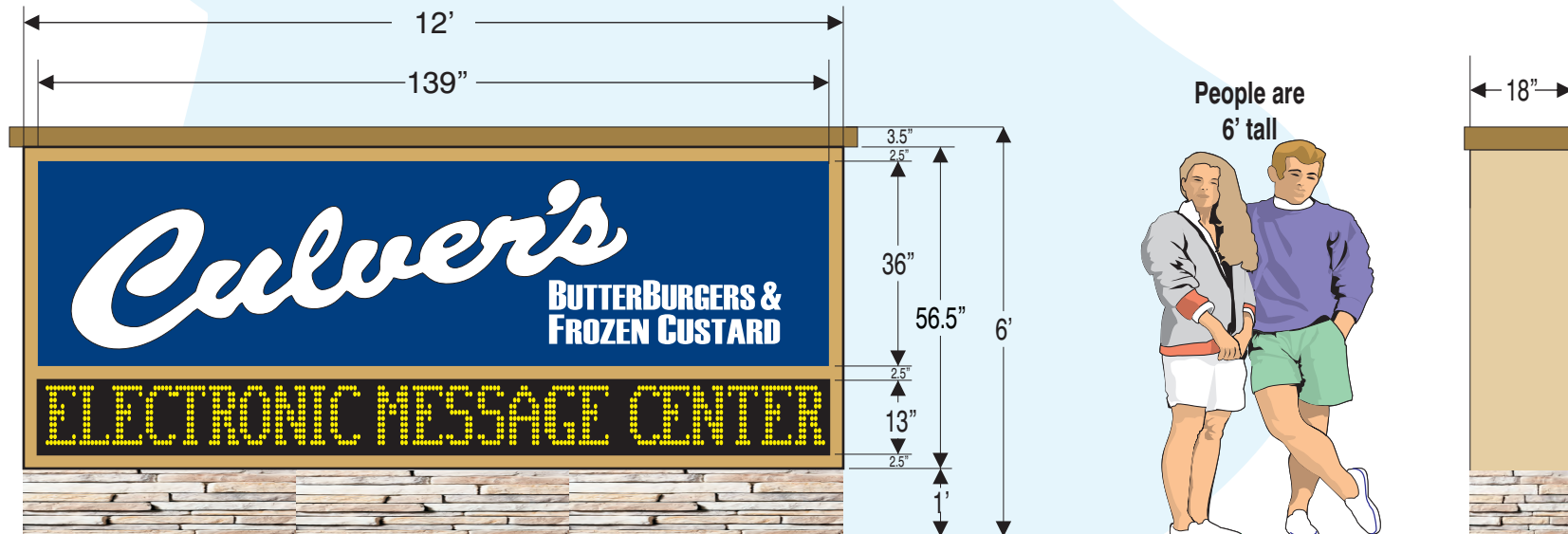
**CALCULATIONS BASED UPON 400 WATT METAL HALIDE LAMPS IN LUMINAIRE WITH AN "R3" DISTRIBUTION AND MOUNTED AT APPROXIMATELY 30' ABOVE GRADE.**

**Plan View**  
 Scale 1" = 40'

STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Property Line	+	2.0 fc	9.9 fc	0.0 fc	N / A	N / A

LUMINAIRE SCHEDULE									
Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
	M	21	AD200-10CW-LED	ABOLITE LED ANGLED REFLECTOR	10 LED LAMPS	A810.IES	5500	0.75	80
	AA	2	KSF2 400M R3	AREA LIGHT WITH TYPE 3, SHORT,CUTOFF REFLECTOR, FLAT GLASS LENS.	ONE 400-WATT CLEAR ED-28 METAL HALIDE, HORIZONTAL POS.	94100501.ies	32000	0.75	465
	AA1	1	KSF2 400M R3	AREA LIGHT WITH TYPE 3, SHORT,CUTOFF REFLECTOR, FLAT GLASS LENS.	ONE 400-WATT CLEAR ED-28 METAL HALIDE, HORIZONTAL POS.	94100501.ies	32000	0.75	930
	WP	3	LM07CWY/FC/CO	BUILDING MOUNTED LUMINAIRE, CUTOFF	ONE 70-WATT CLEAR E-17 METAL HALIDE, HORIZONTAL POSITION.	LTL12142.IES	5200	1.00	95

**Designer**  
 jdt  
**Date**  
 Nov 14, 2011  
**Scale**  
 on dwg  
**Drawing No.**

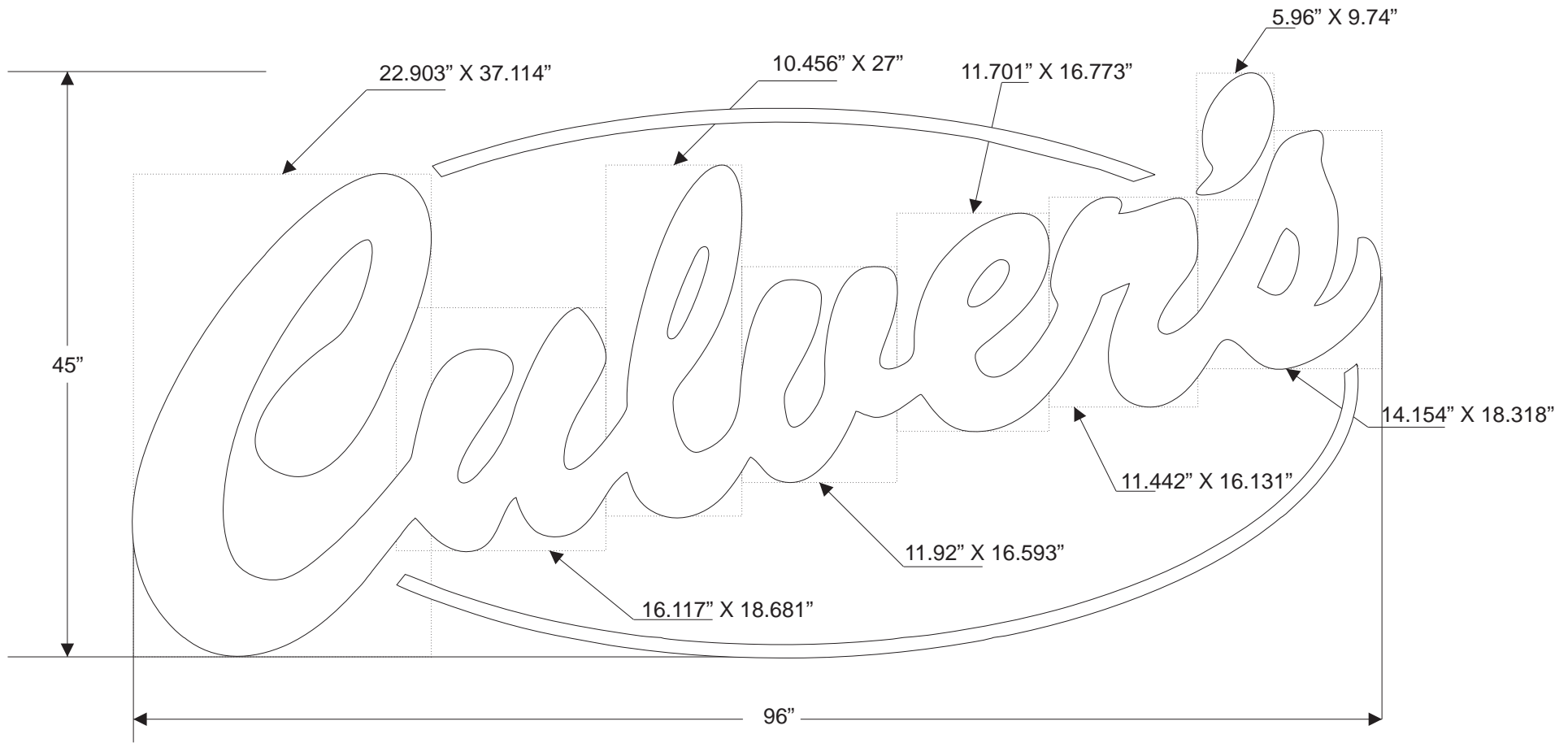


20mm 16 X 176

Concrete and brick work by others

<b>TITLE</b> 12' Long Monument Sign with EMC		<b>THIS DRAWING IS THE PROPERTY OF:</b> <b>Jim Greeley Signs &amp; Awnings, Inc.</b> 100 W. ROBB RD. N. INDUSTRIAL PARK RICHLAND CENTER, WI. 53581 <b>608/647-2628 Fax 608/647-2020</b> <b>1-800-WI-SIGNS</b> <small>IT IS UN-LAWFUL TO USE THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF JIM GREELEY SIGNS AND AWNINGS, INC.</small>	
<b>PROJECT</b> DATE 10-13-2011    SCALE 3/8" = 1'    BY GRD	<b>VINYL FONT FILE</b> P:\0 CULVER'S\ 0 Culver's Stores\ Genoa Township, MI\		

45" x 96" = 4,320 square inches divided by 144=30 square feet

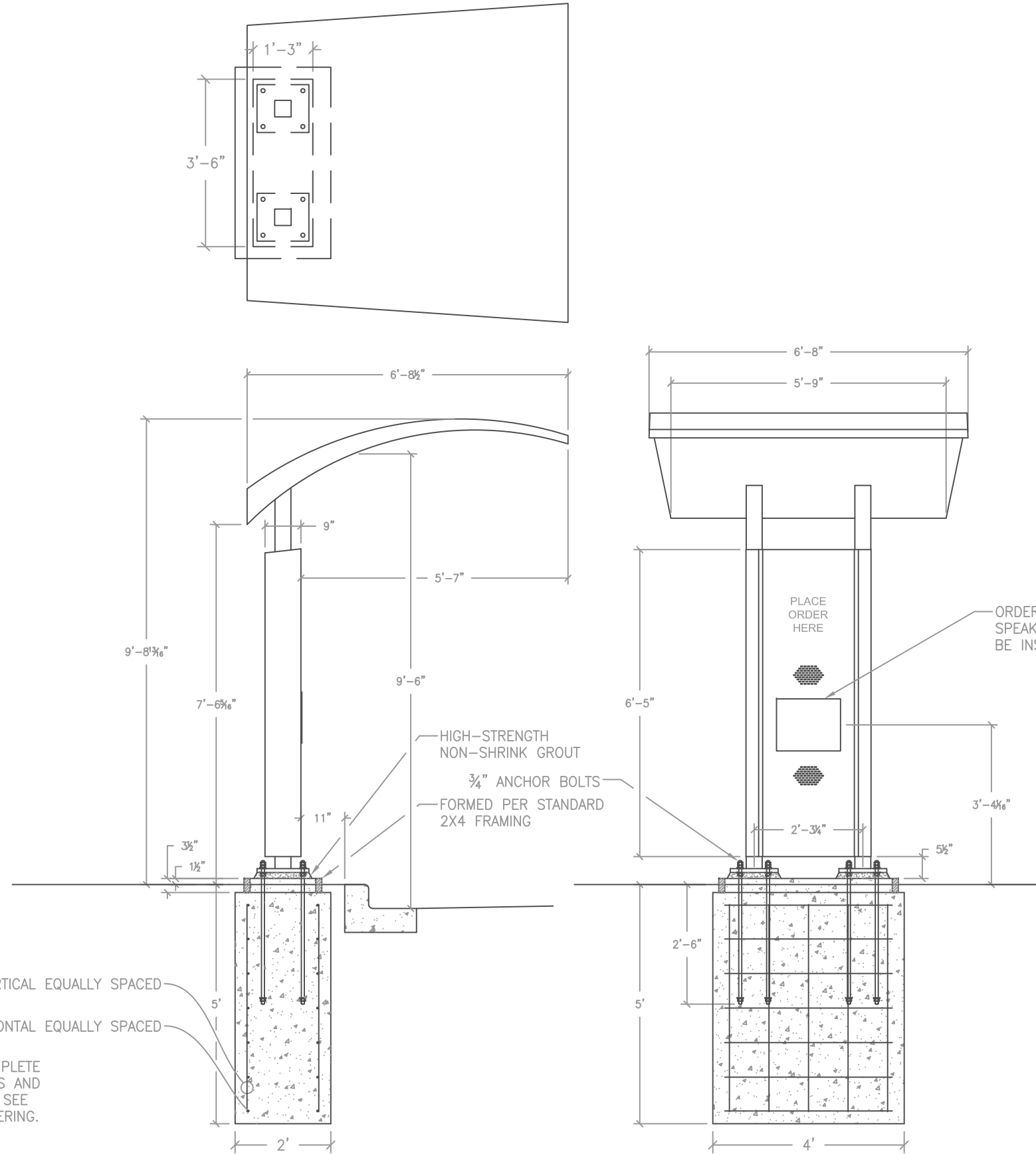


**30 Sq Ft.**  
**(Actual Square Footage measured  
 by drawing a box around sign)**

TITLE <b>Culver's 45" x 96" Script Wall Logo</b>		THIS DRAWING IS THE PROPERTY OF: <b>Jim Greeley Signs &amp; Awnings, Inc.</b> 100 W. ROBB RD. N. INDUSTRIAL PARK RICHLAND CENTER, WI. 53581 <b>608/647-2628 Fax 608/647-2020</b> <b>1-800-WI-SIGNS</b> IT IS UN-LAWFUL TO USE THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF JIM GREELEY SIGNS AND AWNINGS, INC.	
Layout Approved By _____ DATE <b>10-03-2011</b>	Date _____ SCALE <b>1" = 1'</b>	P:\AI's Projects\ BY <b>GRD</b>	

- (5) #6 REBAR VERTICAL EQUALLY SPACED
- (7) #6 REBAR HORIZONTAL EQUALLY SPACED

NOTE: FOR COMPLETE FOOTING DETAILS AND SPECIFICATIONS SEE SEALED ENGINEERING.



SCALE 3/8"=1'

LOCATION:  
**CULVER'S**

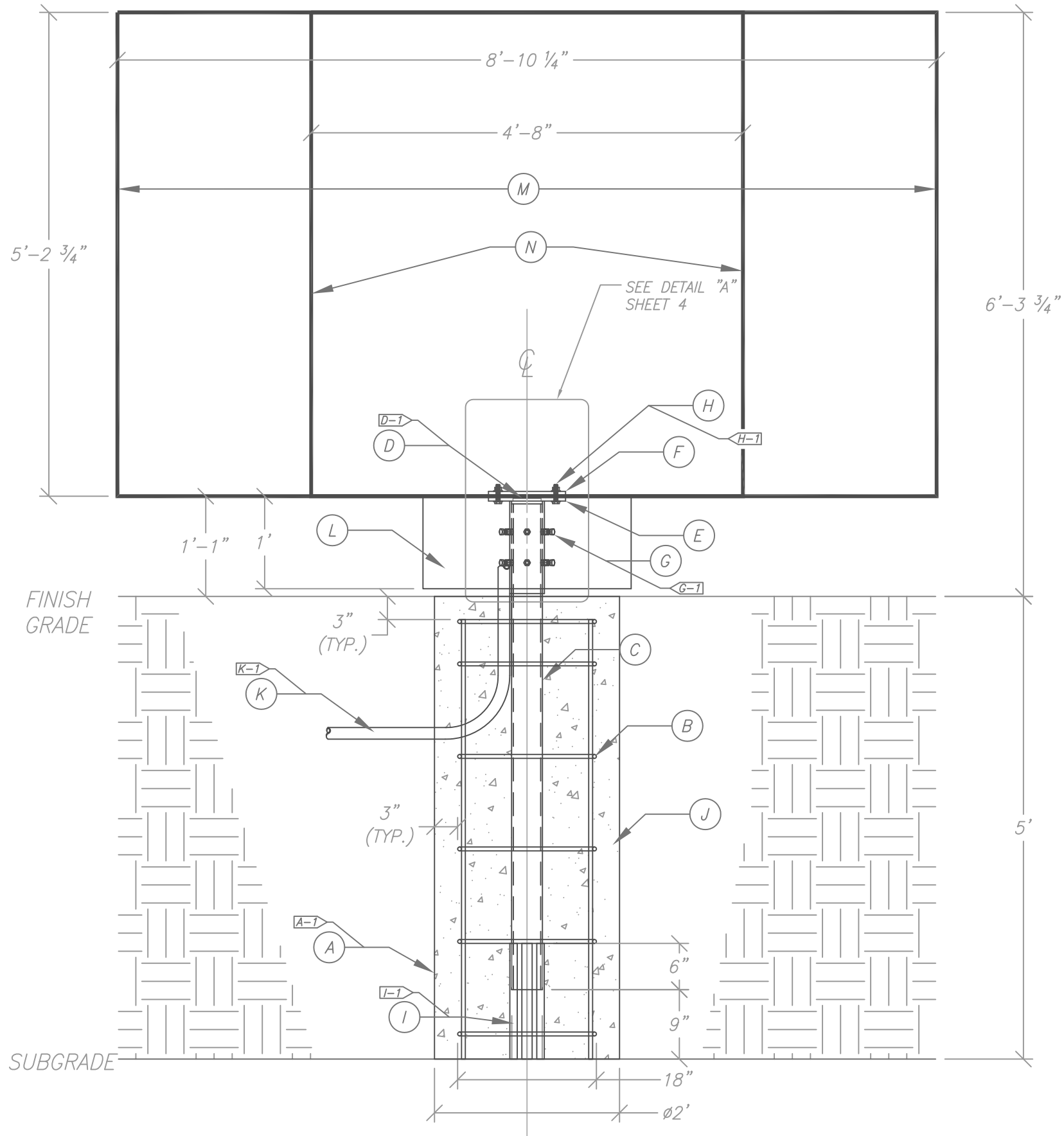
**SPRINGFIELD SIGN & NEON**  
2531 N. Patterson  
Springfield, MO 65803  
(417) 862-2454

Client:  
Culver Franchising  
Systems, Inc.  
540 Water Street  
Prairie du Sac, WI 53578  
p (608) 643-7980

**CULVER FRANCHISING SYSTEM, INC.**  
**CANOPY AND ORDER CONFIRMATION SYSTEM**  
**(DTC-2)**

Project Number:  
Drawn By: SAD  
Reviewed By: MW  
Date: 11-18-14  
Sheet Number:

**1 OF 1**



DRIVE-THROUGH MENU BOARD	
Ⓐ AUGER	
SIZE:	24" UNLESS OTHERWISE DETERMINED BY ENGINEERING/CODE REQUIREMENTS
A-1	NO OVERDIG WILL BE ALLOWED. THE SOIL REMAINING OUTSIDE OF THE DIMENSIONAL LIMITS OF THE AUGERED HOLE IS TO REMAIN UNDISTURBED.
Ⓑ REBAR REINFORCING	
SIZE:	#4'S UNLESS OTHERWISE DETERMINED BY ENGINEERING/CODE REQUIREMENTS
SPACING:	TO BE DETERMINED ON SITE BY ENGINEER
Ⓒ STEEL PIPE	
MATERIAL:	3 1/2" SCHEDULE 40
FINISH:	SAND SMOOTH APPLY RED OXIDE PRIMER
Ⓓ STEEL PIPE	
MATERIAL:	4" SCHEDULE 40
FINISH:	SAND SMOOTH APPLY RED OXIDE PRIMER
D-1	WELDED TO MOUNTING PLATE ALL THE WAY AROUND-2 PLACES
Ⓔ OUTSIDE BASE MOUNTING PLATE	SEE SHEET 5
MATERIAL:	5/8" PLATE STEEL
Ⓕ INSIDE BASE MOUNTING PLATE	SEE SHEET 5
MATERIAL:	5/8" PLATE STEEL
Ⓖ PIPE BOLTS	
MATERIAL:	1/2" x 1 3/4" BOLTS / NUTS
G-1	6 PLACES
Ⓗ MOUNTING PLATE BOLTS	
MATERIAL:	1/2" x 2 1/2" BOLTS / NUTS / WASHERS
H-1	4 PLACES
Ⓘ BASE PIPE SUPPORT	
MATERIAL:	1" STEEL ANGLE-3 PLACES
I-1	WELDED TO BASE PIPE
Ⓢ BACKFILL	
MATERIAL:	2500 PSI CONCRETE OR AS PER ENGINEERING
Ⓚ ELECTRICAL PRIMARY	
K-1	CONDUIT, SWEEP THROUGH FOOTING
Ⓛ SIGN SKIRT	
MATERIAL:	0.063" ROUTED ALUMINUM
Ⓜ MAIN MENU BOARD	
PART #:	MB-DT-46
Ⓝ PRE-SELL MENU BOARD	
PART #:	MB-DT-25-PS & MB-DT-25

SCALE 3/4" = 1'

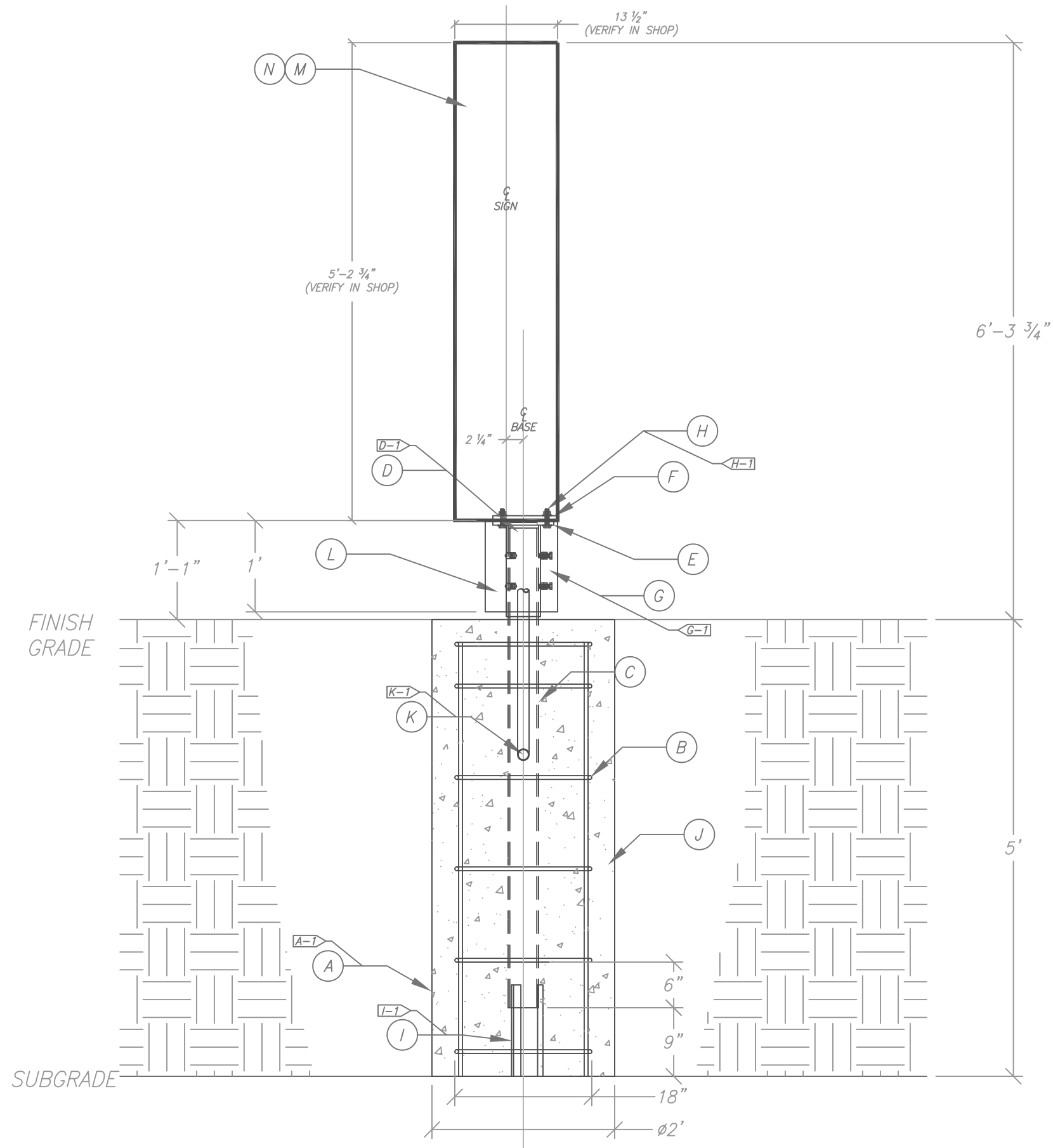
LOCATION: **CULVER'S LOCATIONS**

**SPRINGFIELD SIGN & NEON**  
 2531 N. Patterson  
 Springfield, MO 65803  
 (417) 862-2454

Client:  
 Culver Franchising System, Inc.  
 540 Water Street  
 Prairie du Sac, WI 53578  
 p (608) 643-7980

**CULVER FRANCHISING SYSTEM, INC.**  
**MB-DT-BASE**  
**MAIN MENU BOARD/PRE-SELL MENU BOARD**  
**FRONT VIEW**

Project Number: DEN  
 Drawn By: NW  
 Reviewed By: 1-20-15  
 Date:  
 Sheet Number: **1 OF 5**



DRIVE-THROUGH MENU BOARD	
Ⓐ AUGER	
SIZE:	24" UNLESS OTHERWISE DETERMINED BY ENGINEERING/CODE REQUIREMENTS
A-1	NO OVERDIG WILL BE ALLOWED. THE SOIL REMAINING OUTSIDE OF THE DIMENSIONAL LIMITS OF THE AUGERED HOLE IS TO REMAIN UNDISTURBED.
Ⓑ REBAR REINFORCING	
SIZE:	#4'S UNLESS OTHERWISE DETERMINED BY ENGINEERING/CODE REQUIREMENTS
SPACING:	TO BE DETERMINED ON SITE BY ENGINEER
Ⓒ STEEL PIPE	
MATERIAL:	3 1/2" SCHEDULE 40
FINISH:	SAND SMOOTH APPLY RED OXIDE PRIMER
Ⓓ STEEL PIPE	
MATERIAL:	4" SCHEDULE 40
FINISH:	SAND SMOOTH APPLY RED OXIDE PRIMER
D-1	WELDED TO MOUNTING PLATE ALL THE WAY AROUND-2 PLACES
Ⓔ OUTSIDE BASE MOUNTING PLATE	SEE SHEET 5
MATERIAL:	5/8" PLATE STEEL
Ⓕ INSIDE BASE MOUNTING PLATE	SEE SHEET 5
MATERIAL:	5/8" PLATE STEEL
Ⓖ PIPE BOLTS	
MATERIAL:	1/2" x 1 3/4" BOLTS / NUTS
G-1	6 PLACES
Ⓗ MOUNTING PLATE BOLTS	
MATERIAL:	1/2" x 2 1/2" BOLTS / NUTS / WASHERS
H-1	4 PLACES
Ⓚ BASE PIPE SUPPORT	
MATERIAL:	1" STEEL ANGLE-3 PLACES
I-1	WELDED TO BASE PIPE
Ⓛ BACKFILL	
MATERIAL:	2500 PSI CONCRETE OR AS PER ENGINEERING
Ⓚ ELECTRICAL PRIMARY	
K-1	CONDUIT, SWEEP THROUGH FOOTING
Ⓛ SIGN SKIRT	
MATERIAL:	0.063" ROUTED ALUMINUM
Ⓜ MAIN MENU BOARD	
PART #:	MB-DT-46
Ⓝ PRE-SELL MENU BOARD	
PART #:	MB-DT-25-PS & MB-DT-25

SCALE 3/4" = 1'

LOCATION: **CULVER'S LOCATIONS**

**SPRINGFIELD SIGN & NEON**  
2531 N. Patterson  
Springfield, MO 65803  
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Client:  
Culver Franchising System, Inc.  
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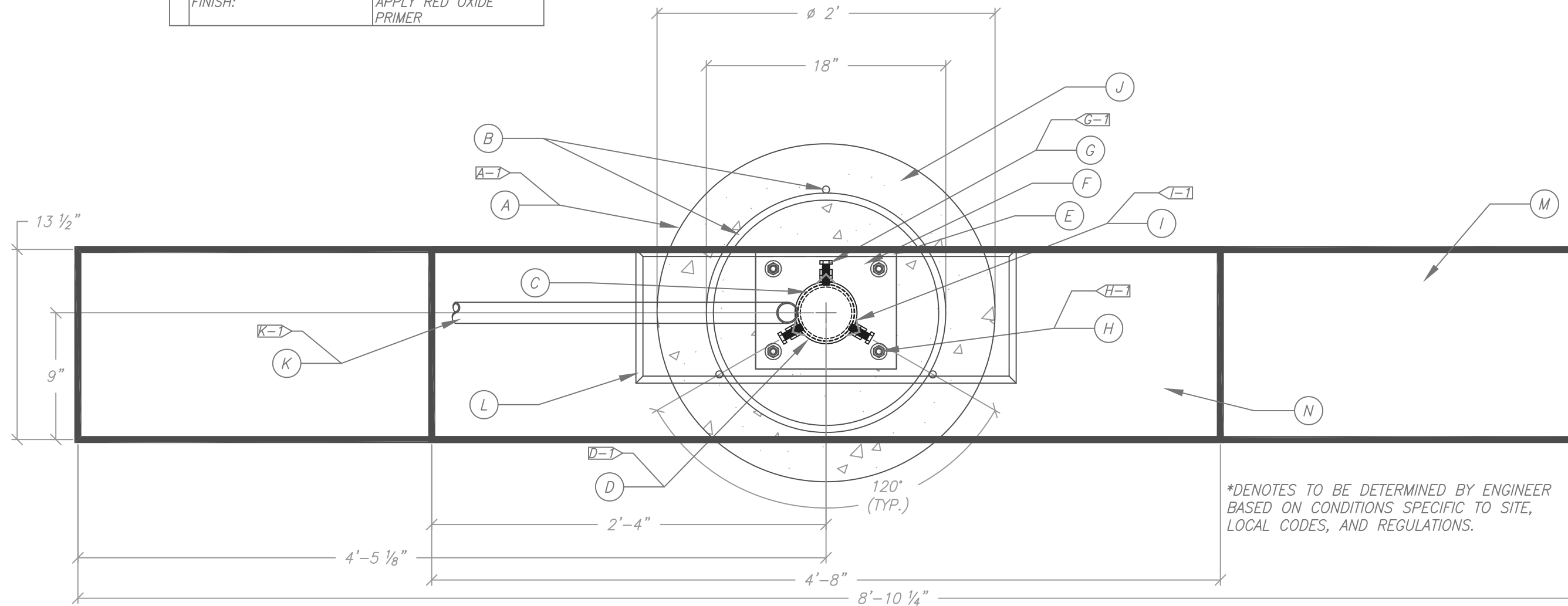
CULVER FRANCHISING SYSTEM, INC.  
**MB-DT-BASE**  
**MAIN MENU BOARD/PRE-SELL MENU BOARD**  
**SIDE VIEW**

Project Number: DEN  
Drawn By: NW  
Reviewed By: 1-20-15  
Date:  
Sheet Number: **2 OF 5**

DRIVE-THROUGH/MAIN MENU BOARD	
Ⓐ AUGER	
SIZE:	24" UNLESS OTHERWISE DETERMINED BY ENGINEERING/CODE REQUIREMENTS
A-1	NO OVERDIG WILL BE ALLOWED. THE SOIL REMAINING OUTSIDE OF THE DIMENSIONAL LIMITS OF THE AUGERED HOLE IS TO REMAIN UNDISTURBED.
Ⓑ REBAR REINFORCING	
SIZE:	#4'S UNLESS OTHERWISE DETERMINED BY ENGINEERING/CODE REQUIREMENTS
SPACING:	TO BE DETERMINED ON SITE BY ENGINEER
Ⓒ STEEL PIPE	
MATERIAL:	3 1/2" SCHEDULE 40
FINISH:	SAND SMOOTH APPLY RED OXIDE PRIMER

Ⓓ STEEL PIPE	
MATERIAL:	4" SCHEDULE 40
FINISH:	SAND SMOOTH APPLY RED OXIDE PRIMER
D-1	WELDED TO MOUNTING PLATE ALL THE WAY AROUND-2 PLACES
Ⓔ OUTSIDE BASE MOUNTING PLATE	SEE SHEET 5
MATERIAL:	5/8" PLATE STEEL
Ⓕ INSIDE BASE MOUNTING PLATE	SEE SHEET 5
MATERIAL:	5/8" PLATE STEEL
Ⓖ PIPE BOLTS	
MATERIAL:	1/2" x 1 3/4" BOLTS / NUTS
G-1	6 PLACES

Ⓗ MOUNTING PLATE BOLTS	
MATERIAL:	1/2" x 2 1/2" BOLTS / NUTS / WASHERS
H-1	4 PLACES
Ⓘ BASE PIPE SUPPORT	
MATERIAL:	1" STEEL ANGLE-3 PLACES
I-1	WELDED TO BASE PIPE
Ⓝ BACKFILL	
MATERIAL:	2500 PSI CONCRETE OR AS PER ENGINEERING
Ⓚ ELECTRICAL PRIMARY	
K-1	CONDUIT, SWEEP THROUGH FOOTING
Ⓛ SIGN SKIRT	
MATERIAL:	0.063" ROUTED ALUMINUM
Ⓜ MAIN MENU BOARD	
PART #:	MB-DT-46
Ⓝ PRE-SELL MENU BOARD	
PART #:	MB-DT-25-PS & MB-DT-25



\*DENOTES TO BE DETERMINED BY ENGINEER  
BASED ON CONDITIONS SPECIFIC TO SITE,  
LOCAL CODES, AND REGULATIONS.

SCALE 1/8" = 1"

LOCATION:  
**CULVER'S LOCATIONS**

**SPRINGFIELD SIGN & NEON**  
2531 N. Patterson  
Springfield, MO 65803  
(417) 862-2454

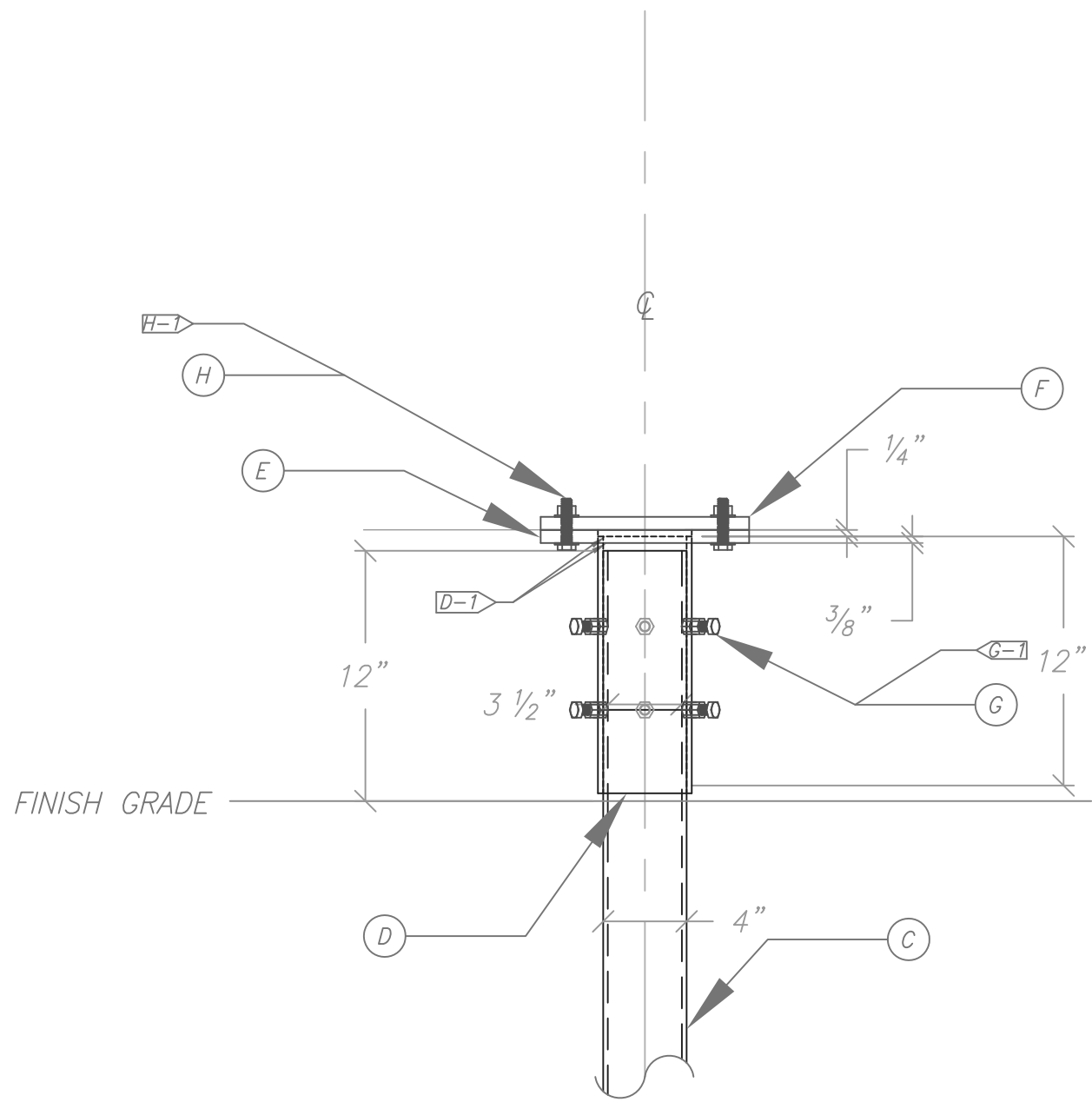
Client:  
Culver Franchising  
System, Inc.  
540 Water Street  
Prairie du Sac, WI 53578  
p (608) 643-7980

CULVER FRANCHISING SYSTEM, INC.  
**MB-DT-BASE**  
**MAIN MENU BOARD/PRE-SELL MENU BOARD**  
**TOP VIEW**

Project Number:  
Drawn By: DEN  
Reviewed By: NW  
Date: 1-20-15

Sheet Number:  
**3 OF 5**





DRIVE-THROUGH/MAIN MENU BOARD

Ⓒ	STEEL PIPE	
	MATERIAL:	3 1/2" SCHEDULE 40
	FINISH:	SAND SMOOTH APPLY RED OXIDE PRIMER
Ⓓ	STEEL PIPE	
	MATERIAL:	4" SCHEDULE 40
	FINISH:	SAND SMOOTH APPLY RED OXIDE PRIMER
	D-1	WELDED TO MOUNTING PLATE ALL THE WAY AROUND-2 PLACES
Ⓔ	OUTSIDE BASE MOUNTING PLATE	SEE SHEET 5
	MATERIAL:	5/8" PLATE STEEL
Ⓕ	INSIDE BASE MOUNTING PLATE	SEE SHEET 5
	MATERIAL:	5/8" PLATE STEEL
Ⓖ	PIPE BOLTS	
	MATERIAL	1/2" x 1 3/4" BOLTS / NUTS
	G-1	6 PLACES
Ⓗ	MOUNTING PLATE BOLTS	
	MATERIAL:	1/2" x 2 1/2" BOLTS / NUTS / WASHERS
	H-1	4 PLACES

SCALE 1/8" = 1"

LOCATION:  
**CULVER'S LOCATIONS**

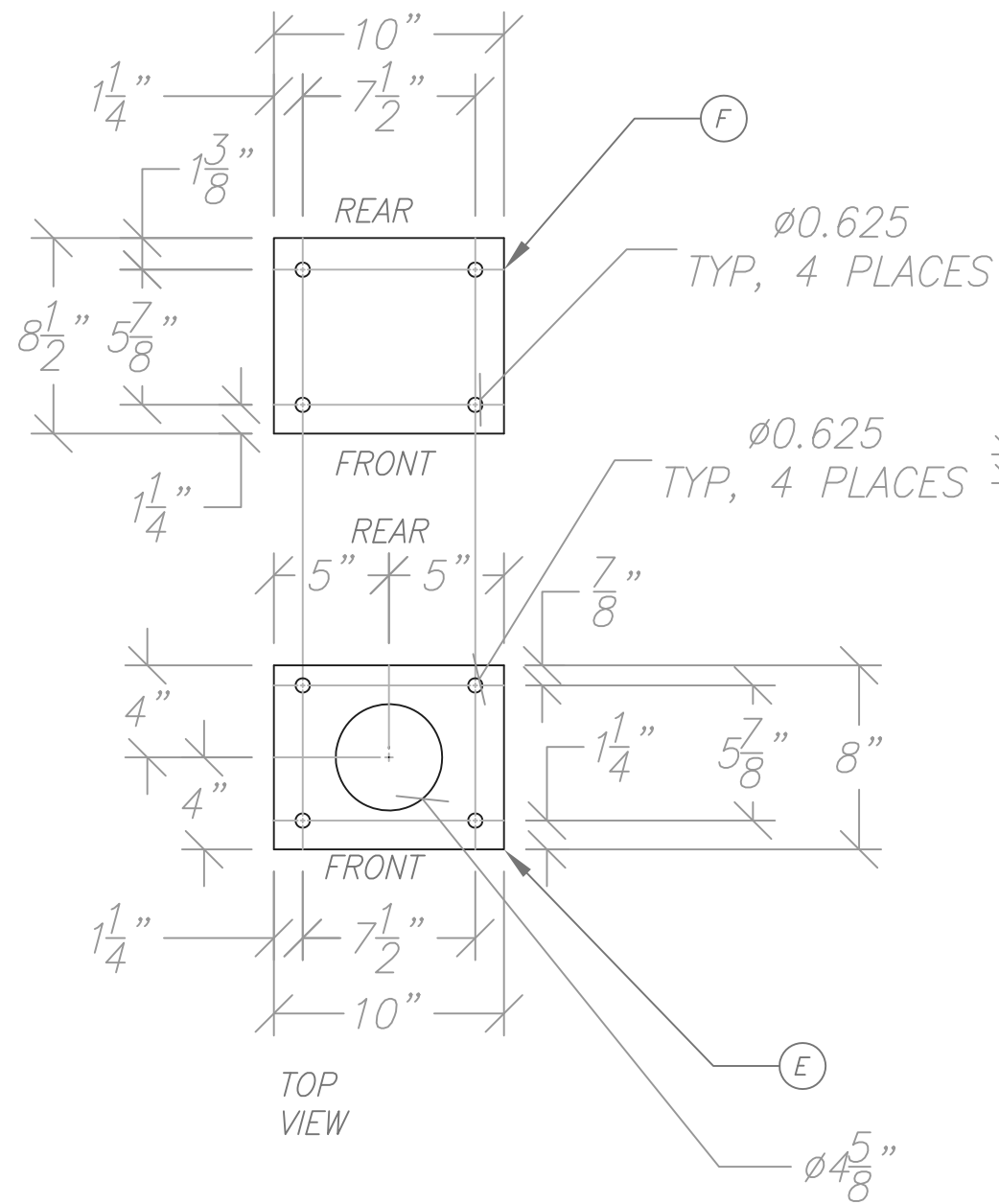
**SPRINGFIELD SIGN & NEON**  
2531 N. Patterson  
Springfield, MO 65803  
(417) 862-2454

Client:  
Culver Franchising System, Inc.  
540 Water Street  
Prairie du Sac, WI 53578  
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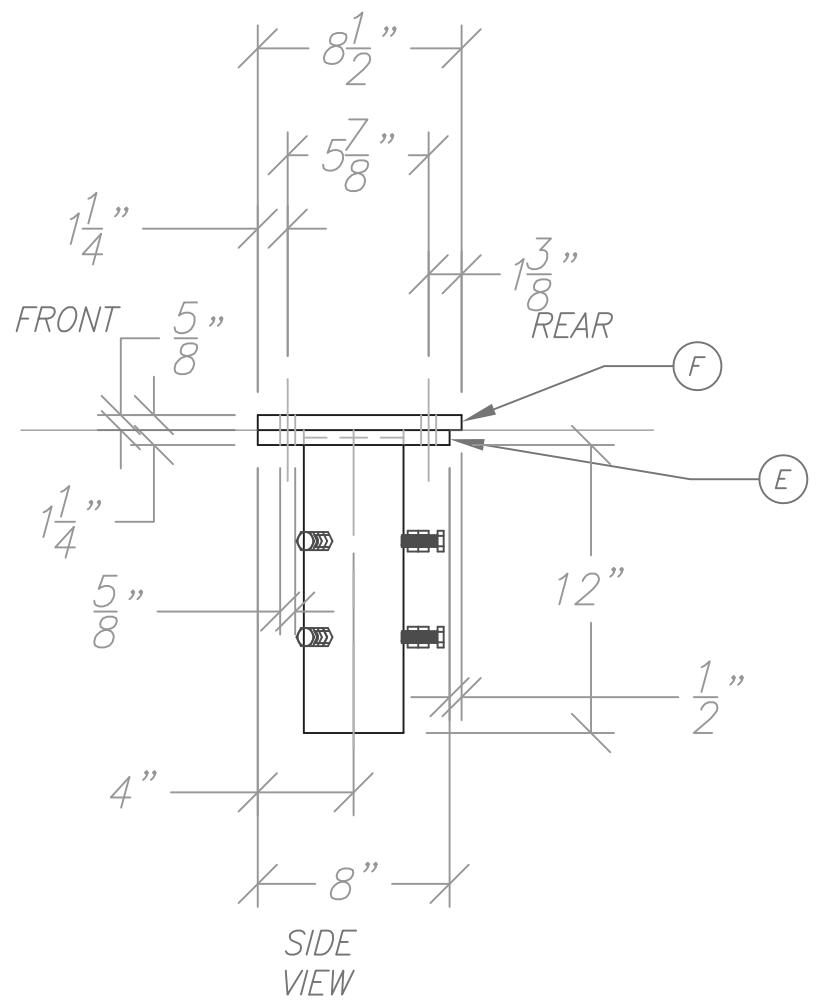
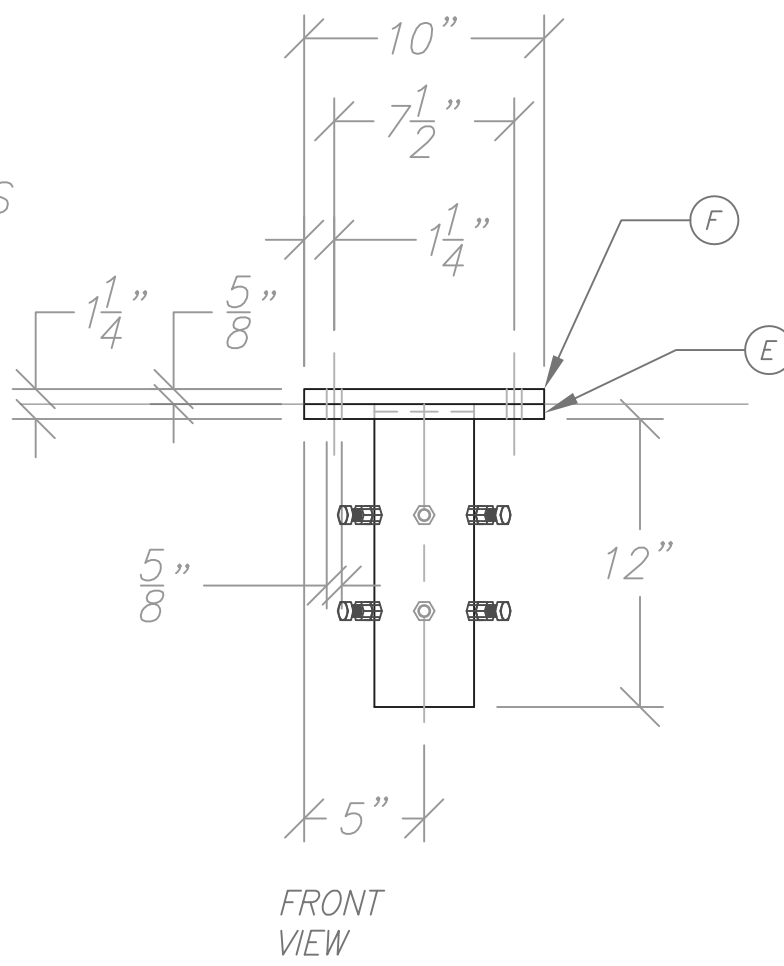
CULVER FRANCHISING SYSTEM, INC.  
**DRIVE-THROUGH/MAIN MENU BOARD**  
**SIGN BASE**  
**DETAIL A**

Project Number:  
Drawn By: DEN  
Reviewed By: NW  
Date: 1-20-15

Sheet Number:  
**4 OF 5**



DRIVE-THROUGH/MAIN MENU BOARD	
(E) OUTSIDE BASE MOUNTING PLATE	
MATERIAL:	5/8" PLATE STEEL
(F) INSIDE BASE MOUNTING PLATE	
MATERIAL:	5/8" PLATE STEEL



LOCATION: **CULVER'S LOCATIONS**

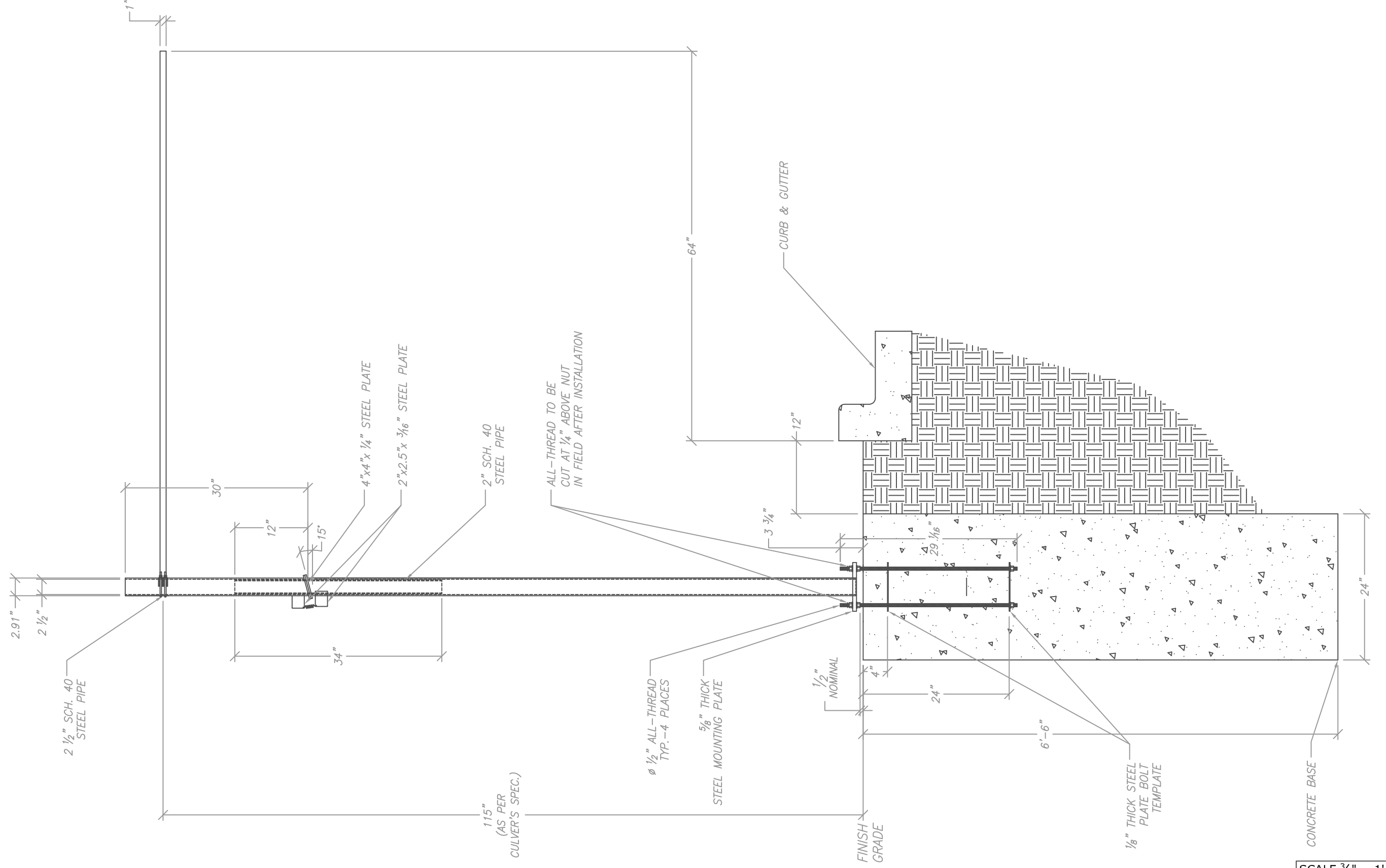
**SPRINGFIELD SIGN & NEON**  
 2531 N. Patterson  
 Springfield, MO 65803  
 (417) 862-2454

Client:  
 Culver Franchising  
 System, Inc.  
 540 Water Street  
 Prairie du Sac, WI 53578  
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CULVER FRANCHISING SYSTEM, INC.  
 DRIVE-THROUGH/MAIN MENU BOARD  
 BASE MOUNTING PLATES  
 SIGN BASE-DETAIL

Project Number: DEN  
 Drawn By: NW  
 Reviewed By: 1-20-15  
 Date:   
 Sheet Number: **5 OF 5**

SCALE 1/8" = 1"



Project Number: DEN  
 Drawn By: NW  
 Reviewed By: 6-24-15  
 Date:

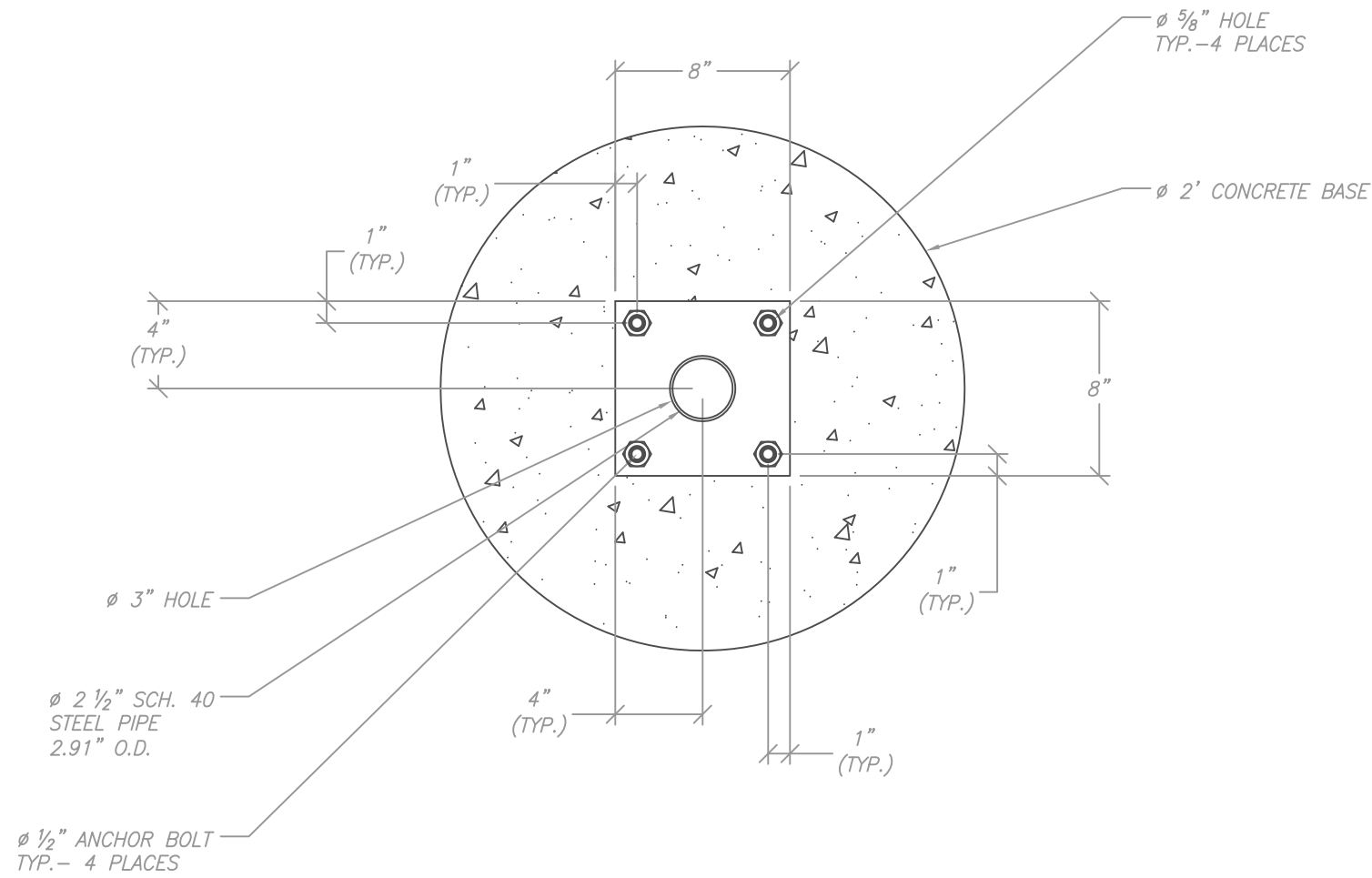
Sheet Number:  
**1 OF 3**

CULVER FRANCHISING SYSTEM, INC.  
**VEHICLE HEIGHT DETECTOR**  
 FRONT VIEW

LOCATION:  
**CULVER'S**

Client:  
 Culver Franchising System, Inc.  
 540 Water Street  
 Prairie du Sac, WI 53578  
 p (608) 643-7980

**SPRINGFIELD SIGN & NEON**  
 2531 N. Patterson  
 Springfield, MO 65803  
 (417) 862-2454



STEEL PLATE - 5/8" THICK  
 CENTERED ON  $\phi$  2' CONCRETE BASE

SCALE 1 1/2" = 1'

LOCATION:  
**CULVER'S**

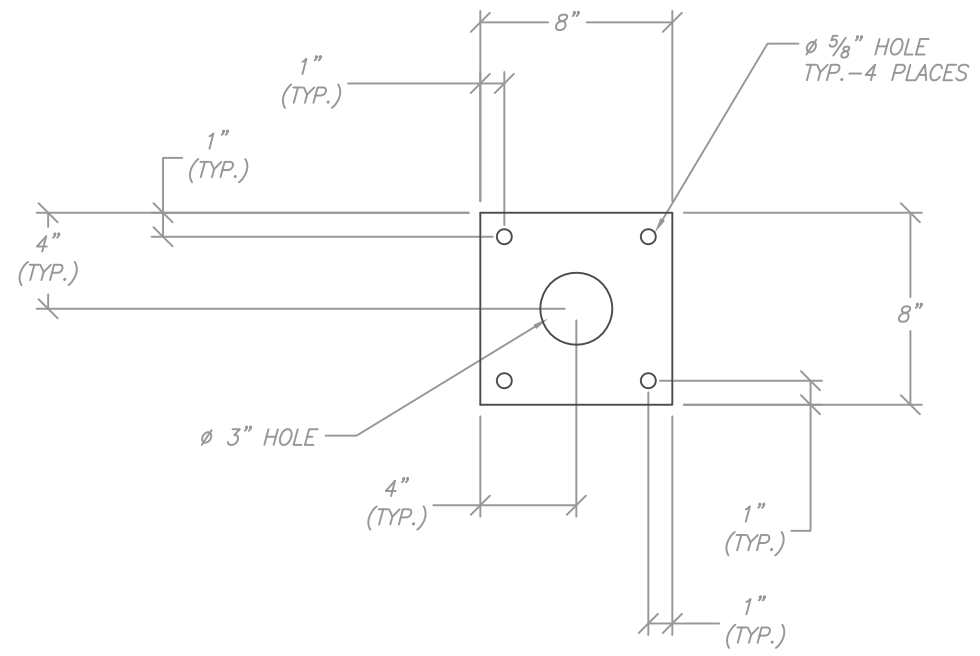
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 (417) 862-2454

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 540 Water Street  
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 p (608) 643-7980

CULVER FRANCHISING SYSTEM, INC.  
 VEHICLE HEIGHT DETECTOR  
 CONCRETE BASE/MOUNTING PLATE  
 TOP VIEW

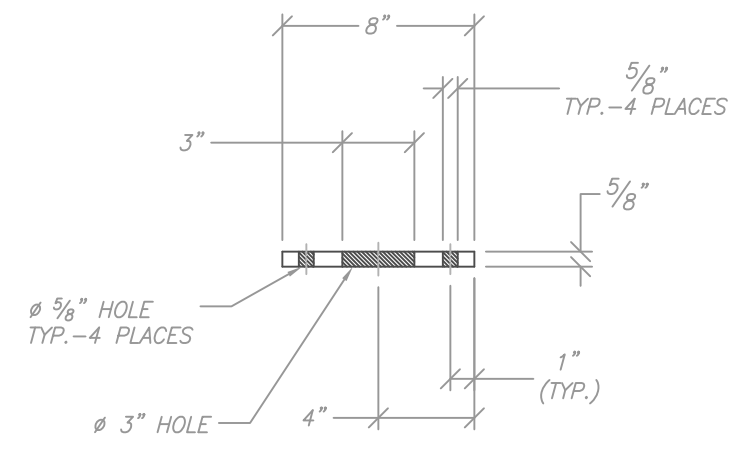
Project Number:  
 Drawn By: DEN  
 Reviewed By: NW  
 Date: 6-24-15

Sheet Number:  
**2 OF 3**

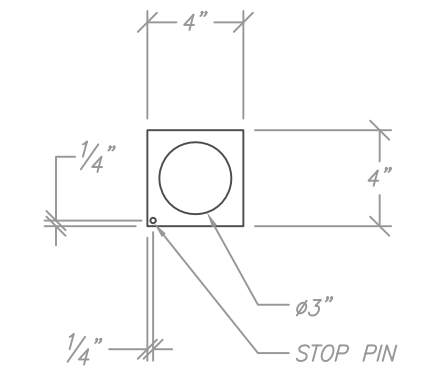


TOP VIEW

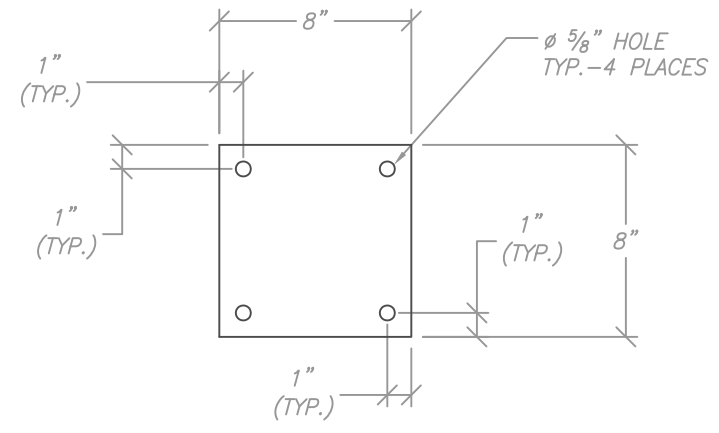
STEEL PLATE-5/8" THICK



SIDE VIEW

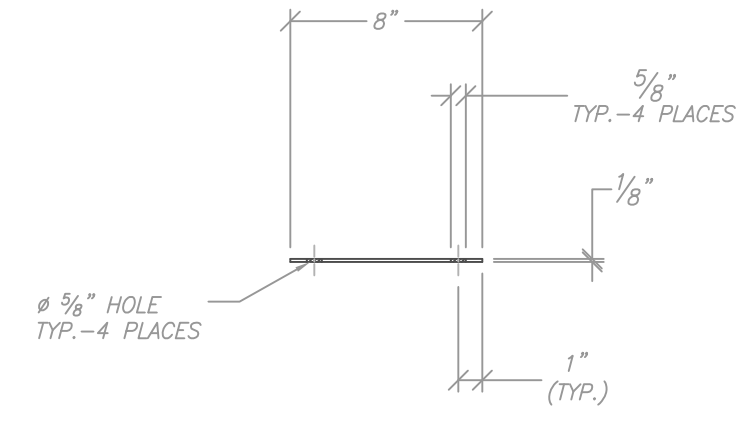


STEEL PLATE-1/4" THICK



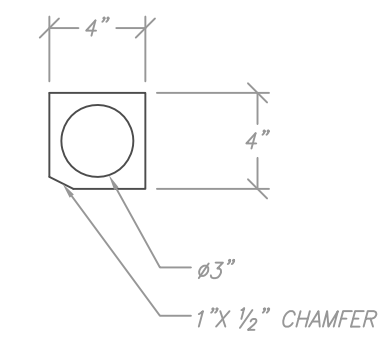
TOP VIEW

STEEL PLATE-1/8" THICK



SIDE VIEW

STEEL PLATE-1/4" THICK



SCALE 1 1/2" = 1'

LOCATION:  
**CULVER'S**

**SPRINGFIELD SIGN & NEON**  
2531 N. Patterson  
Springfield, MO 65803  
(417) 862-2454

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540 Water Street  
Prairie du Sac, WI 53578  
p (608) 643-7980

**CULVER FRANCHISING SYSTEM, INC.**  
**VEHICLE HEIGHT DETECTOR**  
**STEEL MOUNTING PLATE**

Project Number:  
Drawn By: DEN  
Reviewed By: NW  
Date:  
Sheet Number:  
**3 OF 3**

**GENOA CHARTER TOWNSHIP  
PLANNING COMMISSION  
PUBLIC HEARING  
JUNE 8, 2015  
6:30 P.M.  
MINUTES**

CALL TO ORDER: The meeting of the Genoa Township Planning Commission was called to order at 6:31 p.m. Present were Barbara Figurski, James Mortensen, John McManus, Diana Lowe, Eric Rauch, Chris Grajek, and Chairman Doug Brown. Also present were Kelly VanMarter, Community Development Director/Assistant Township Manager; Gary Markstrom of Tetra Tech; and Michelle Foster of LSL.

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was recited.

APPROVAL OF AGENDA: Upon motion by John McManus and support by Barbara Figurski, the agenda was approved as submitted. **Motion carried unanimously.**

CALL TO THE PUBLIC: A Call to the Public was made with no response.

**OPEN PUBLIC HEARING #1**... Review of a special use, sketch plan, and environmental impact assessment for a proposed K-12 Livingston Christian School to be located within the Brighton Church of the Nazarene, located at 7669 Brighton Road, Brighton, Michigan, parcel # 4711-25-400-058. The request is petitioned by Brighton Nazarene Church.

**Motion** by Diana Lowe to recuse Eric Rauch. Support by Chris Grajek. **Motion carried unanimously.**

Steve Morgan addressed the Planning Commission. He is a member of the church. The petitioner is requesting an amendment to the special use permit to allow for a school. The average class size is estimated to be 15 at greatest. Due to the class sizes, the sports teams will not be large.

Mr. Morgan addressed the landscaping and screening first. A photograph taken from the cul-de-sac on Aljoann Drive facing the church was provided. Approximately three weeks ago, the church members cleared up the dead trees and brush in this area. Another photograph was provided that illustrates what that area would look like in two years with the newly planted trees.

The pastor met with the property owners of adjacent lots to discuss their concerns. He feels that they are all now on good terms and willing to work with each other. He reported that they are all in agreement with the new plans for landscaping and screening. The proposed fence is over 700 feet long and is on the church property by 10 or 15 feet for the majority of that length.

A portion of the church lot would be dedicated as a park for the occupants of Aljoann.

The property line between the new facility and the church next door will be planted with arborvitae.

A call to the public was made regarding the landscaping. Jay Johnson addressed the Planning Commission. He is a neighbor from Aljoann. He suggested that the park is not really a park, but rather a landscape buffer. The church will maintain the property, but they will grant an easement to the property owners from Aljoann. He indicated that he supports the current plan. The church would take care of any dying trees, etc. Chairman Brown suggested they place their agreement in writing.

Mike Barrett, president of the homeowners association addressed the Planning Commission. He feels the meeting with the church was very productive. He suggested the church place a gate in the fence for maintenance purposes.

Michelle Foster indicated that the landscaping plans from 2013 had not been fulfilled, but it appears the petitioner is working toward that goal.

Steve Morgan next addressed the traffic study. Chairman Brown indicated that a traffic study for 250/35 was requested and he feels that it has not yet been provided. Mr. Morgan indicated the forecast date was reduced to 2018 and reduced the student population. Chairman Brown indicated that the study for 250/35 was requested for the purpose of planning ahead. He is requesting that a condition be placed on the facility use that once it hits 200, a new traffic study should be done at that point to determine where the traffic should flow at that time. The church believes that the traffic on Brighton Road has been reduced due to the new Latson Road interchange. Mr. Morgan indicated Boss Engineering is already retained to review traffic flow every October.

Cathy Morehouse of 5700 Site Court in Brighton, Michigan runs a private school and suggests that a layered drop-off/pick-up time based on last name might be a good option for the school. She has found that it works well in similar situations.

Chairman Brown asked if it would be possible for the school to report attendance on the Monday following the third Friday in September each year. Ms. VanMarter indicated that can certainly be required.

Mr. Morgan went on to review the traffic study statistics and periods with the Planning Commission.

Michelle Foster informs the Planning Commission that pedestrian circulation is also a concern on this site.

The call to the public was made with the following response:

Don Yaquinto lives in Pine Creek and is concerned with the increased traffic on Brighton Road and possible cut-through traffic in his subdivision. If people are unable to turn left out of the church/school property they will turn around at the Pine Creek entrance and cause congestion in the left turn lane.

Colleen Bussey lives on Aljoann and has a child who attends the high school. She cannot believe that this request has gotten this far because the traffic in this area is so bad. She stated that drivers don't follow the rules now and this will only make it worse.

Virginia Wennerberg of 7230 Pine Vista addressed the Planning Commission. She asked about what plan "b" would be for a larger capacity. Mr. Markstrom explained the options. She asked if the Planning Commission feels there is a maximum number that the petitioner could never exceed. Chairman Brown indicated that given the size of the building, he believes the maximum student body is 250 with a staff of 35. But unfortunately, he cannot give a clear answer at this time.

Carol Hawley of Pine Creek Ridge asked if staff was counted, as well as teachers, such as nurses, secretaries, etc. The petitioner indicated the number 26 includes staff and teachers. She asked about custodians and lunch staff. They are estimating the staff based on current numbers. She asked if it exceeds that number, would the school close down. Chairman Brown discussed doing annual reviews of staff and student counts.

Andy Koch addressed the Planning Commission. He runs the driving certification located at the church. He believes the impact on traffic is minimal. His hours are 9 to 5 with the certification class. He adjusts class schedule so as not to interrupt weddings, funerals, etc. In an average month, he tests 25 tractor trailers, most of which have their reverse alerts turned off.

Andrea Spanstra inquired whether weekend testing was performed. Mr. Koch indicated Saturdays from 8 to noon and that is usually personal vehicles. She commended Mr. Koch on being respectful to the neighborhood.

Conchi Freund is a resident of Pine Creek Ridge and has been for 18 years. She appreciates the fact that the impact on the community is being studied. She supports the Livingston Christian School. She wants to focus on the positive of what the school will bring to the community.

The call to the public was closed.

### **Planning Commission recommendation of petition**

- A. Recommendation of Special Use
- B. Recommendation of Environmental Impact Assessment (03-16-15)
- C. Recommendation of Sketch Plan (05-14-14)

Motion by Mr. Mortensen to table this matter to July 13, 2015. Support by Chris Grajek.  
**Motion carried unanimously.**

Kelly VanMarter will discuss Mr. Koch's illegal non-conforming use with the Township Attorney to determine how to proceed. Michelle Foster indicated that an opinion by the Township Attorney should be obtained. She then reviewed her list of outstanding issues as requested by the petitioner. The park will not be deeded or an easement provided to the neighbors. It will remain church property and be maintained by the church.



**OPEN PUBLIC HEARING #2...** Review of a sketch plan application for an amendment to the approved building elevations for Brighton Church of the Nazarene, located at 7669 Brighton Road, Brighton, Michigan, parcel # 4711-25-400-058. The request is petitioned by Brighton Nazarene Church.

Eric Rauch rejoined the meeting.

Gary Anscombe, Construction Manager for the church addressed the Planning Commission. He apologized to the Board and the Township and knows that he should have applied for an amended site plan and the church had no reason to think of it. It takes full responsibility.

The approved elevation was not a buildable design. Therefore, the amendment is requested. The north half of the elevation drained into the wall. The roof was changed to prevent ice dams and water pooling. Additionally, the handicap elevator needed to be changed.

There will be a new color in front. The colored rendering is not an exact duplicate of the colors, but samples were provided. They were unable to exactly duplicate the brick color, so there has been a change to allow for which areas will have brick. The roof line has been changed to accommodate water/snow. This has already been built. There is no brick left with which to meet the ordinance.

Chris Grajek asked about using cultured stone. The petitioner indicated that it's possible to use brick or cultured stone. The split faced block could possibly be used to match.

Mr. Rauch asked about utilizing an awning structure to break it up.

Mr. Mortensen indicated he would not be comfortable approving anything without a rendering. The petitioner could obtain one within a week or so. The next meeting is July 13.

Mr. Grajek asked about the percentage of brick. Ms. Foster indicated since it's in a residential section, no percentages apply.

Mr. Grajek indicated the renderings would be helpful if the colors are accurate.

The petitioner indicated he would like to continue working on the interior of the entrance system while this matter is pending. The building department would need him to do that.

The petitioner will look into making the south wall a darker color and adding windows to the south wall. Ms. VanMarter suggested carrying the brown of the roof up the south wall and north wall.

Mr. Mortensen and Mr. McManus would like to see renderings as well.

A call to the public was made.

Mike Barrett addressed the Planning Commission. He asked for clarification regarding percentage of brick.

Colleen Bussy addressed the Planning Commission and indicated she thinks the structure is too big. Jay Johnston again addressed the Planning Commission regarding the color. Andrea Spanford indicated she thinks it looks like a warehouse.

The call to the public was closed.

The architect is present and agrees with all of the ideas/comments.

**Planning Commission disposition of petition**

A. Disposition of Amended Site Plan Building Elevations (received on 05-29-15)

**Motion** by James Mortensen to recommend approval of the amended site plan subject to future approval of exterior building materials. Staff may issue a temporary land use permit to allow the petition to continue working on the interior. The temporary land use permit will expire on July 21, 2015 if not renewed. Support by Diana Lowe. **Motion carried unanimously.**

**OPEN PUBLIC HEARING #3...**Review of the Genoa Charter Township Capital Improvement Plan.

Mr. Mortensen has an issue with the road projects rejected by the voters being included. He is also opposed to the solar panels.

**Planning Commission disposition of petition**

A. Disposition of Capital Improvement Plan

**Motion** by James Mortensen to adopt the capital improvement plan with the exception of the road projects and solar panel. Support by Diana Lowe. **Motion carried unanimously.**

**Administrative Business:**

- *Staff report. Kelly VanMarter gave a staff report to the Planning Commission.*
- *Approval of May 11, 2015 Planning Commission meeting minutes. **Motion** by Barbara Figurski and support by James Mortensen to adopt the minutes as amended. **Motion carried unanimously.***
- *Member discussion.*
- *Adjournment. **Motion** to adjourn by Barbara Figurski at 10:04 p.m. Support by John McManus. **Motion carried unanimously.***